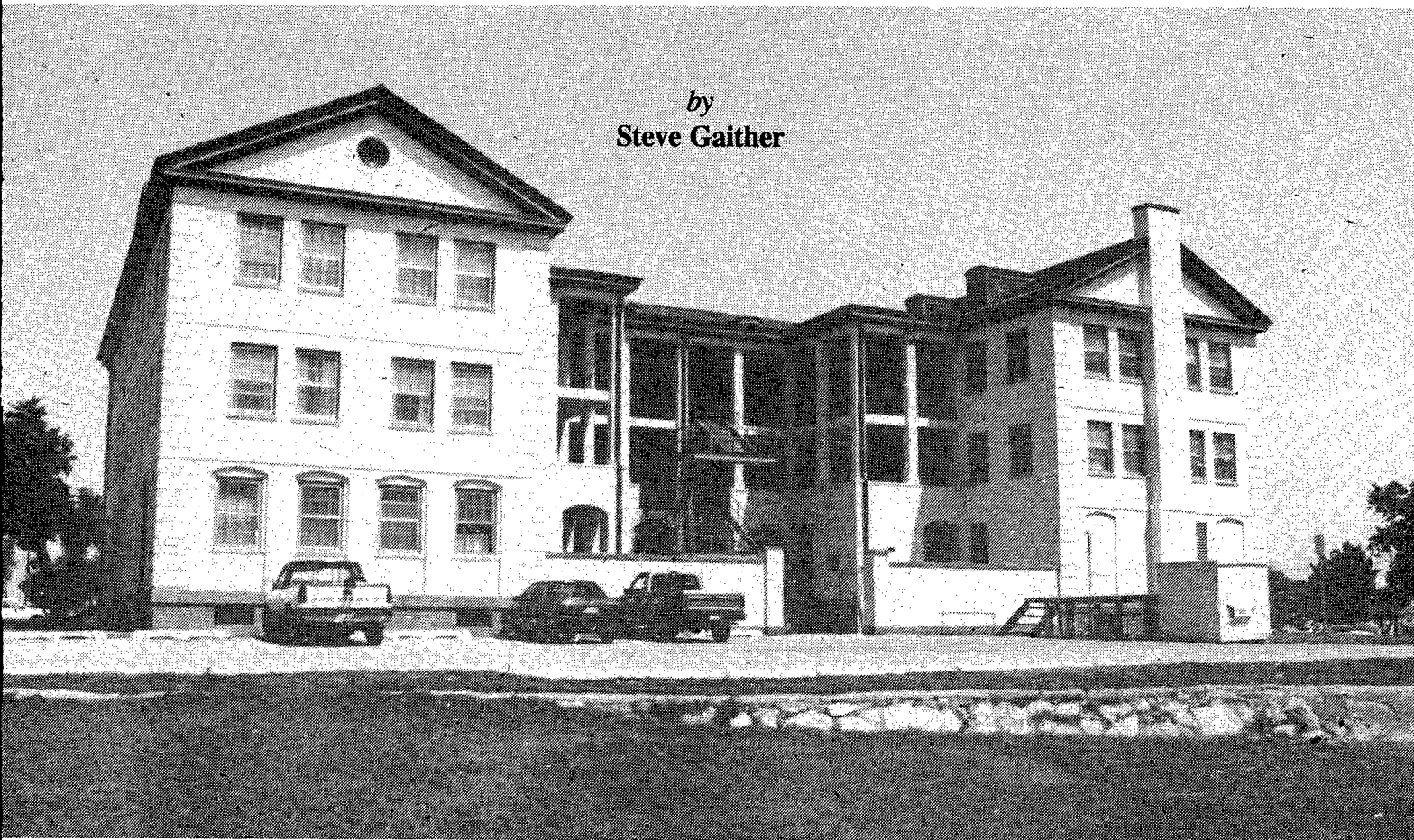

THE FIRST THIRTY YEARS: POST FIELD AND ITS ROLE IN MILITARY AVIATION, 1915 - 1945

by
Steve Gaither



FORT SILL MILITARY RESERVATION TECHNICAL SERIES
REPORT OF INVESTIGATIONS
NUMBER 7



GEO-MARINE, INC.

19971120 013

DISTRIBUTION STATEMENT A

Approved for public release;
Distribution Unlimited

Cover: The Administration Building (Building 5030) at Post Field. It was constructed in 1933 as the Air Corps Barracks and is an example of the Mission/Spanish Colonial architectural style used in the design of many Post Field buildings. The Administration Building is considered a contributing element to the proposed Post Field Historic District.

REPORT DOCUMENTATION PAGE

Form Approved
OMB No. 0704-0188

Public reporting burden for this collection of information is estimated to average 1 hour per response, including the time for reviewing instructions, searching existing data sources, gathering and maintaining the data needed, and completing and reviewing the collection of information. Send comments regarding this burden estimate or any other aspect of this collection of information, including suggestions for reducing this burden, to Washington Headquarters Services, Directorate for Information Operations and Reports, 1215 Jefferson Davis Highway, Suite 1204, Arlington, VA 22202-4302, and to the Office of Management and Budget, Paperwork Reduction Project (0704-0188), Washington, DC 20503.

1. AGENCY USE ONLY (Leave blank)

2. REPORT DATE
1997

3. REPORT TYPE AND DATES COVERED
Final

4. TITLE AND SUBTITLE
The First Thirty Years: Post Field and Its Role in Military Aviation, 1915-1945

5. FUNDING NUMBERS
C
DACW56-92-D-0010

6. AUTHOR(S)
Gaither, Steve

7. PERFORMING ORGANIZATION NAME(S) AND ADDRESS(ES)

Geo-Marine, Inc.
550 East 15th Street
Plano, TX 75074

8. PERFORMING ORGANIZATION
REPORT NUMBER

9. SPONSORING / MONITORING AGENCY NAME(S) AND ADDRESS(ES)

US Army
HQ, USAFACFS
Fort Sill, OK 73503-5100

10. SPONSORING / MONITORING
AGENCY REPORT NUMBER

11. SUPPLEMENTARY NOTES

12a. DISTRIBUTION / AVAILABILITY STATEMENT

Approved for public release: Distribution is unlimited.

12b. DISTRIBUTION CODE

13. ABSTRACT (Maximum 200 words)

This report presents a historic context and architectural assessment for Post Field at Fort Sill, Oklahoma, and an assessment of the significance of the facility within the development of military aviation. The assessment of the permanent buildings at Post Field indicates the group of permanent buildings built between 1932 and 1935 are significant as contributing elements to the proposed Post Field historic district and are eligible for inclusion on the National Register of Historic Places.

INFO QUALITY EVALUATED 4

14. SUBJECT TERMS
Fort Sill, Oklahoma; Comanche County, Oklahoma; historic buildings; aviation; Post Field

15. NUMBER OF PAGES
94

16. PRICE CODE

17. SECURITY CLASSIFICATION
OF REPORT
Unclassified

18. SECURITY CLASSIFICATION OF THIS
PAGE
Unclassified

19. SECURITY CLASSIFICATION
OF ABSTRACT
Unclassified

20. LIMITATION OF ABSTRACT
UL

**THE FIRST THIRTY YEARS: POST FIELD
AND ITS ROLE IN MILITARY AVIATION, 1915-1945**

by
Steve Gaither

Principal Investigator
Duane E. Peter

for
Directorate of Environmental Quality
Fort Sill Military Reservation
Fort Sill, Oklahoma
and
U.S. Army Corps of Engineers
Tulsa District

FORT SILL MILITARY RESERVATION TECHNICAL SERIES
REPORT OF INVESTIGATIONS
NUMBER 7

Geo-Marine, Inc.
550 East 15th Street
Plano, Texas 75074

January 1997

CONTRACT DATA

The preparation of this document was accomplished under Contract No. DACW56-92-D-0010, Delivery Order No. 015 (GMI project # 1110-015), with the U.S. Army Corps of Engineers, Tulsa District, 1645 South 101 East Ave., Tulsa, Oklahoma 74128-0061.

MANAGEMENT SUMMARY

This report presents a historic context and architectural assessment for Post Field at Fort Sill, Oklahoma, and an assessment of the significance of the facility within the development of military aviation. The purpose of this assessment was to determine whether a group of buildings constructed between 1932 and 1935 warrant inclusion in the National Register of Historic Places as a historic district. The research and assessment was conducted by Geo-Marine, Inc., during the fall of 1995. Duane Peter, Senior Archeologist at Geo-Marine, served as Principal Investigator. Geo-Marine historian Steve Gaither conducted the research for the context and assessment under the direction of Kimberly Kane, Archivist-Historian at Geo-Marine.

This report demonstrates that the group of pre-World War II permanent buildings constructed at Post Field, although not considered significant for the historical period in which they were built, did achieve significance for their role in World War II since they were associated with the establishment of Army Aviation. These buildings, both individually and collectively as a district, also present an excellent example of the Mission/Spanish Colonial Revival architectural style used by the War Department in many southern states during the period between World War I and II.

All of the contributing elements to the proposed historic district were built in response to a need at Post Field, as well as at nearly every other Army base in the continental United States, to replace dilapidated World War I mobilization buildings that were then being used to house and support troops. Although the housing program began in the mid-1920s, it was not implemented at Fort Sill, including Post Field, until 1932. The delay was most likely the result of indecisiveness in the War Department concerning the permanent location of the Field Artillery School. That school was permanently established at Fort Sill at the end of 1930, giving definite objectives for facility improvements.

Success in the use of combined air and ground forces during Army maneuvers of the 1920s and 1930s induced the War Department to conduct tests in 1941 to determine whether a more formal educational and functional relationship between air and ground forces should be worked out; the results prompted the establishment of the Department of Air Training in the summer of 1942 at Post Field, and thus began Army Aviation, whose purpose was and is to provide direct organic air support for ground forces. Additional mobilization buildings of temporary construction were built to supplement the buildings already there, providing housing and services for the new students.

In summary, this assessment of the permanent buildings at Post Field indicates the group of permanent buildings built between 1932 and 1935 are significant as contributing elements to the proposed Post Field Historic District and that they retain a high level of integrity. The proposed district fulfills National Register Criteria A and C, as defined by 36 CFR 60.4, making it eligible for inclusion in the National Register of Historic Places. Of the 47 buildings within the proposed Post Field Historic District, 38 are considered contributing elements.

TABLE OF CONTENTS

MANAGEMENT SUMMARY	iii
1. INTRODUCTION	1
2. OBJECTIVES AND METHODS	3
Objectives	3
Methods	3
3. THE FIRST THIRTY YEARS: POST FIELD AND ITS ROLE IN MILITARY AVIATION,	
1915-1945	5
Introduction	5
Early Development of Military Flight	7
The Ascent of the First Military Balloons	7
The Birth of Heavier-Than-Air Flight	8
The Eyes of the Army and World War I	10
The Post World War I Years—Struggle for Growth	24
The Army Housing Program and 1930s Construction at Post Field	31
Technological and Organizational Developments of the 1930s	33
The Escalation of Hostilities and World War II	35
4. THE CONTRIBUTING ELEMENTS OF THE POST FIELD HISTORIC DISTRICT	
AT FORT SILL	43
Introduction	43
Building Descriptions and Construction Histories	45
5. FORT SILL PROPERTY TYPES AT POST FIELD	79
Introduction	79
Hangars	79
Housing	80
Support Facilities	81
Storage Facilities	81
Utility and Infrastructure Facilities	82
6. CONCLUSION	83
Summary of Status	83
Assessment	84
REFERENCES CITED	87

LIST OF FIGURES

1. Current map of Post Field, showing contributing elements and the proposed boundaries	2
2. Location of Post Field on the Fort Sill Military Reservation, April 1945	6
3. Location of Post Field, October 1917	21
4. Aviation-related facilities in the continental U.S. at the end of World War I	25
5. Post Field as it appeared in 1927	29
6. Primary Air Corps fields and depots in 1939	36
7. Post Field as it appeared in April 1945	40
8. Building 4908, Aircraft Maintenance Hangar	49
9. Building 4908, Aircraft Maintenance Hangar, first and second floor plans	50
10. Building 5030, Administration Building	52
11. Building 5030, Administration Building, first floor plan	53
12. Building 5031, Fire Station	54
13. Building 5031, Fire Station, first and second floor plans	55
14. Building 5032, Clinic, without beds	56
15. Building 5032, Clinic, without beds, floor plan	57
16. Building 5033, Calibration Facility	59
17. Building 5033, Calibration Facility, floor plan	60
18. Building 5037, Aircraft Maintenance Facility	62
19. Building 5037, Aircraft Maintenance Facility, floor plan	63
20. Building 5041, Inflammable Materials Storage	64
21. Building 5041, Inflammable Materials Storage, floor plan	64
22. Building 5042, Heat Plant Building	65
23. Building 5042, Heat Plant Building, floor plan	65
24. Building 5054, an example of a Detached Garage at Post Field	66
25. Floor plan for the five-bay detached garage	67
26. Building 5070, an example of a Family Housing unit for noncommissioned officers and enlisted troops constructed at Post Field	69
27. Basement and first floor plans for buildings 5060 through 5071, Family Housing units for noncommissioned officers and enlisted troops constructed at Post Field	70
28. Building 5077, an example of the Family Housing units for Lieutenant Colonel and Major along the north end of Rumble Road: (a) front elevation; (b) rear elevation and east side	72
29. First and second floor plans for buildings 5075 through 5077 and 5080 through 5083, Family Housing units for Lieutenant Colonel and Major along the north end of Rumble Road	73
30. Building 5079, Family Housing, Lieutenant Colonel and Major	75
31. Building 5079, Family Housing, Lieutenant Colonel and Major, first and second floor plans	76
32. Building 5091, Distribution Transformer Building	77

LIST OF TABLES

1. Principal Army Aviation Facilities in the Continental U.S., 1919-1939	13
2. Standing Buildings in the Post Field Area	44
3. Architectural Data for Contributing Elements to the Post Field Historic District	46

CHAPTER 1

INTRODUCTION

This report presents a historical and architectural assessment of Post Field, the airfield at Fort Sill, Oklahoma. Geo-Marine, Inc. (GMI), entered a contract with the United States Army Corps of Engineers, Tulsa District, to undertake this project in late 1993. Background research at the National Archives and Records Administration (NARA) was begun in June 1995, and research into local archives was conducted during September and October 1995. GMI historian Kimberly L. Kane oversaw the work as it was conducted, and Duane E. Peter, Vice-President of GMI's Cultural Resources Division acted as Principal Investigator. Research for the document was conducted by GMI historians Steve Gaither and Marsha Prior.

The work on this project was done under Contract Number DACW56-92-D-0010, Delivery Order 15, in partial fulfillment of the United States Army's responsibility under the National Environmental Policy Act of 1969 (PL 90-190); the National Historic Preservation Act of 1966 (PL 96-515), as amended through 1992; and the Archaeological and Historic Preservation Act of 1974 (PL 93-291), as amended.

The completion of the contracted task included the development of a historic context for the proposed Post Field Historic District. It also involved research into the history of aviation and its use by United States military forces to provide background information necessary for an understanding of the role and significance of the airfield in the development of flight and flight related activities, especially within the United States military establishment. The architectural assessment included the completion of construction histories and architectural descriptions for each type of building considered a contributing element of the proposed historic district, as well as an examination of the modifications to each contributing element and an assessment of their current integrity.

In the historic context chapter of this report, entitled "The First Thirty Years: Post Field and its Role in Military Aviation, 1915 - 1945," the early history of military aviation is followed; the first 30 years of activity at the proposed Post Field Historic District (Figure 1) is integrated into that history. The next chapter, "Buildings in the Proposed Post Field Historic District," contains tables listing all buildings in the proposed historic district and the contributing elements to the proposed historic district, and contains a history of the construction and modification of each building or style of building considered to be a contributing element. The next chapter outlines property types pertinent to the buildings at Post Field. In the conclusion of this report, the results of the evaluation of the proposed historic district according to the National Register of Historic Places criteria are presented.

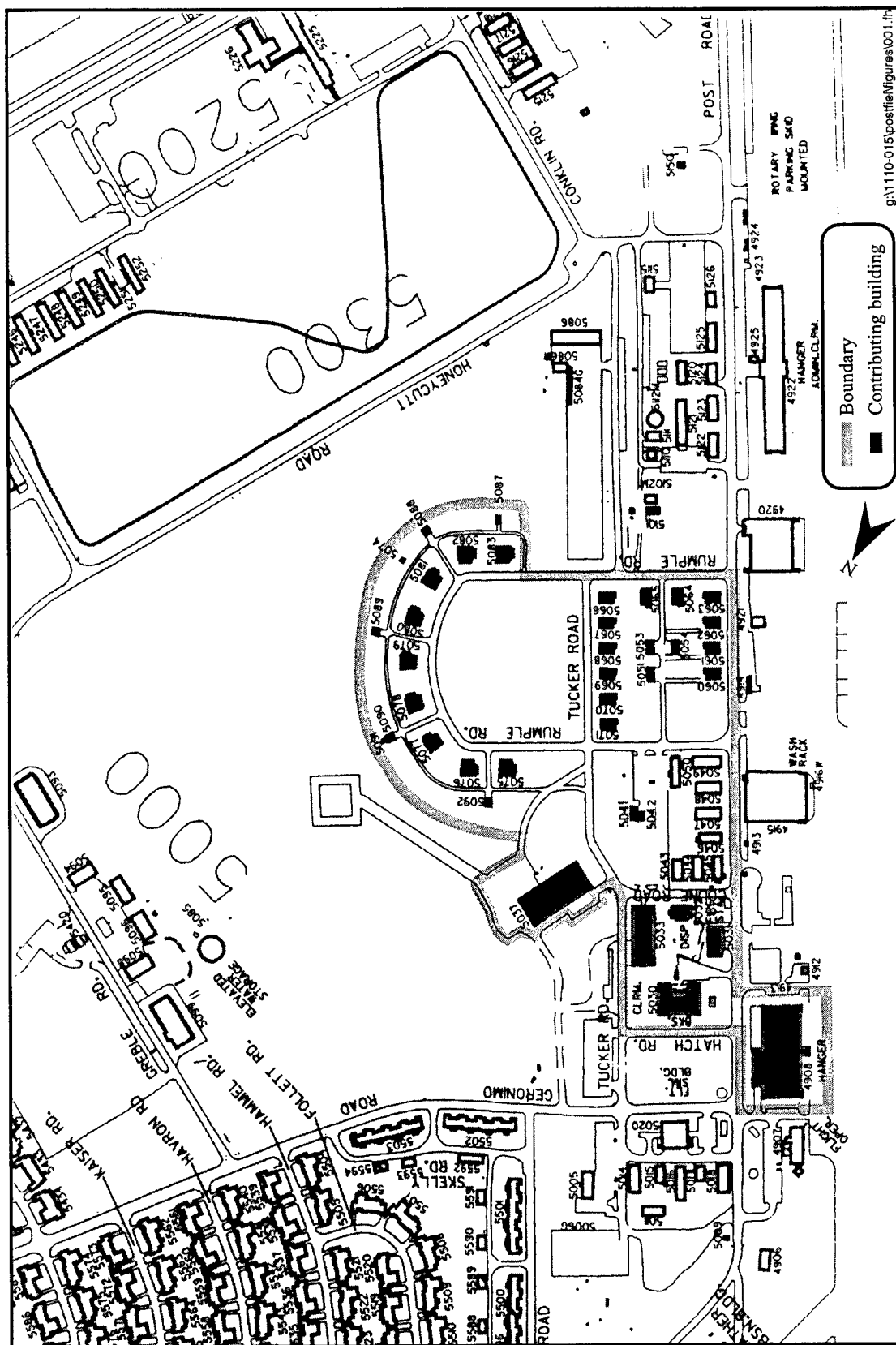


Figure 1. Current map of Post Field, showing contributing elements and the proposed boundaries (from Directorate of Public Works 1992, Fort Sill).

CHAPTER 2

OBJECTIVES AND METHODS

OBJECTIVES

The objective of this project is the development of a historic context and an architectural assessment of the integrity and significance of a group of permanent buildings at Post Field, Fort Sill, Oklahoma, according to National Register criteria. This assessment has been undertaken as part of the process required to designate Post Field as a National Register of Historic Places historic district.

METHODS

In preparing this document extensive archival research at the local, regional, and national level was undertaken. A search of textual, cartographic, and photographic records was conducted at the National Archives and Records Administration (NARA) in Washington, D.C. This research yielded information concerning architectural design, contractors, building materials, and construction costs. Most of the information came from construction completion reports, document files, and consolidated correspondence files, all part of the Records of the Office of the Quartermaster General (Record Group 92). Records at the Fort Worth, Texas, branch of NARA were also consulted, but they provided little data necessary to the research goals of this project.

Standard sources of military history were consulted for information regarding the military and political settings for the period covered by this context. The three series *The U.S. Air Service in World War I*, *U.S. Army in World War II*, and *The Army Air Forces in World War II* provided much of the background material. M. Maurer's *Aviation in the U.S. Army, 1919-1939*, J.A. Hennessy's *The United States Army Air Arm, April 1861 to April 1917*, and J.S. Underwood's *The Wings of Democracy, The Influence of Air Power on the Roosevelt Administration, 1933-1941* also provided valuable background information.

Several information resources at Fort Sill were consulted. The extensive collections at the Fort Sill Museum Archives were researched, with much appreciated assistance from Judy Crowder and Towana Spivey, personnel in charge of the archives there. The records on file include data on buildings, news clippings, pilots' diaries, copies of Fort Sill publications *The Guidon* and *The Cannoneer*, and a variety of published and unpublished documents that were essential to the successful completion of this project. Holdings at the Morris Swett Technical Library at Fort Sill were also examined, as were building documentation files in the Real Property and Engineering Office. The location of the necessary records in that office was greatly assisted by Carol Clutter, who is in charge of these records and has a good knowledge of them. Historic

American Building Survey/Historic American Engineering Record (HABS/HAER) documentation and other records on file in the Directorate of Environmental Quality office were used extensively.

In addition, microfilm copies of the *Lawton Constitution* and other local publications on file at the Lawton Public Library, Lawton, Oklahoma, were consulted. A search for other materials at the library was also conducted, but the best resource at the library was the microfilm collection.

CHAPTER 3

THE FIRST THIRTY YEARS: POST FIELD AND ITS ROLE IN MILITARY AVIATION, 1915 - 1945

INTRODUCTION

This chapter presents a chronological overview of flight in the United States during its early years, with a special emphasis on the applications of flight for military purposes and how the development of military flight affected the establishment and evolution of Post Field, in the southeast corner of Fort Sill (Figure 2), near Lawton, Oklahoma. Since both balloons and aircraft were stationed at Post Field, this overview presents histories of both. In addition to issues that are directly related to the establishment and operations of Post Field, important events taking place at other facilities are also discussed. Such a broad view is necessary for the development of an accurate historic context, since it is only through an examination of the development of military aviation as a whole that the significance of an individual facility can be properly assessed.

Post Field began playing a role in U.S. aviation in 1915, and from that point forward this context integrates the history of Post Field with pertinent national and global issues and developments. There were four primary developmental periods in the history of Post Field during the time period covered by this context, all related to significant events in U.S. and world history. The area that later became Post Field was first used in connection with aviation in 1915, when the First Aero Squadron (the first organized military air squadron in U.S. history) was temporarily stationed at Fort Sill to conduct experiments in the direction of artillery fire. The squadron built several buildings and structures during its brief stay there. During World War I, the second period of development, Post Field was officially established and several temporary buildings were constructed. After a hiatus of several years, during which time many of the buildings at Post Field deteriorated beyond economical repair or were damaged or destroyed by fire, a group of about 40 permanent buildings were constructed at the airfield. These buildings, all constructed during the early and mid-1930s as part of a housing program for Fort Sill and for the Army as a whole, are the focus of this assessment. The fourth developmental period for Post Field occurred during World War II, when Army Aviation was established at the airfield. Although there were additional buildings constructed during this period, these were nearly all temporary mobilization buildings.

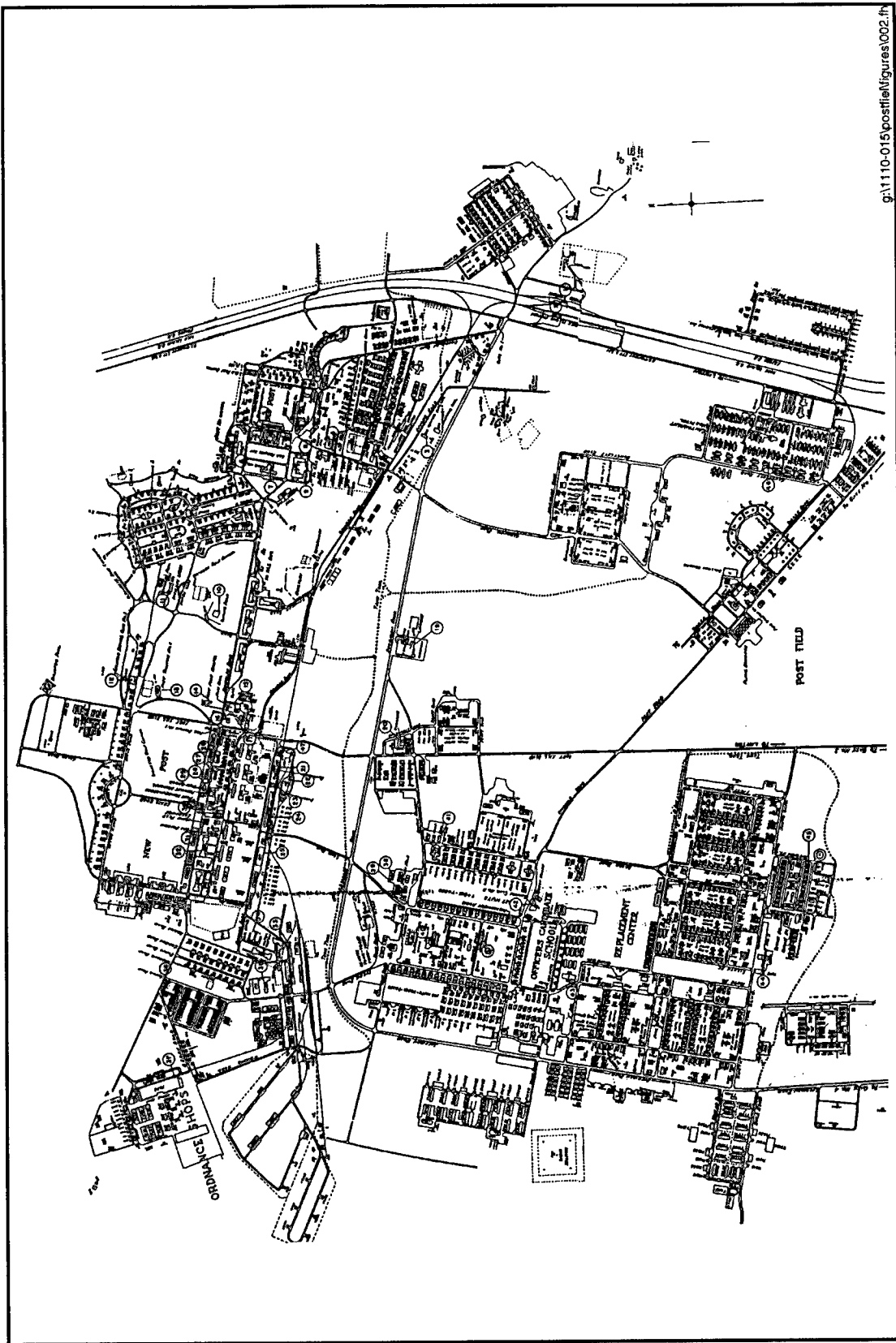


Figure 2. Location of Post Field on the Fort Sill Military Reservation, April 1945 (McCaw 1946).

EARLY DEVELOPMENT OF MILITARY FLIGHT

The Ascent of the First Military Balloons

In the U.S., the first flight by military personnel occurred in June 1861, only three weeks after President Abraham Lincoln first called for troops at the beginning of the war between the states. Two members of the Rhode Island First Regiment (State Militia) made a captive¹ ascent over Washington, D.C., in one or both of their personal balloons they had brought with them to Washington for use in the service. These two balloons were both lost the following July, but there was no dearth of balloon enthusiasts wishing to demonstrate the efficacy of flight to Union leaders.

Two days after the first captive ascent over Washington, civilian Thaddeus S.C. Lowe was received by Lincoln and granted \$250 from the War Department to conduct balloon demonstrations. His trial ascents impressed Lincoln and helped convince military leaders and the War Department of the important role aerial observation could play in reconnaissance; soon a balloon was ordered. The War Department's first balloon was delivered in Washington on 21 July 1861. Lowe continued to use his own balloon, the *Enterprise*, for demonstrations and to aid the Union forces when allowed to do so, and he continued pushing for the establishment of a balloon corps. Lowe saw his desires grow to fruition between August 1861 and January 1862, when seven balloons were built under his direction for the Union Army, along with a portable hydrogen generator Lowe had designed. However, the shortage of funds for paying the aeronauts, difficulties in procuring supplies (or the reimbursement for supplies Lowe bought with his own money), and transportation difficulties brought about an early end to this first branch of military aeronautics, even though their limited operations had shown great promise. The balloon corps was disbanded in June 1863 (Currey 1984:5-8; Hennessy 1985:1, 4-10).

From that date until the early 1890s there were no balloon operations in the U.S. military, even though the importance of balloons in military operations can be attested by the fact that Japan and many European countries had established balloon corps by 1884. The second beginning of military aviation in the U.S. began inadvertently when, on 1 October 1890, Congress assigned the Army Signal Corps "the duty of collecting and transmitting information for the Army, a duty which the Chief Signal Officer, Brig. Gen. Adolphus V. Greely, interpreted to include aerial navigation" (Hennessy 1985:11-12). The following year, Greely requested appropriations for a balloon section of the Signal Corps, which was established in 1892 (Hennessy 1985:12). In direct connection with its mission of "collecting and transmitting information," the balloon section began conducting experiments in photography from balloons in 1893 (Hennessy 1985:15).

By the beginning of the Spanish-American War in 1898, the balloon section still had only one balloon, built by Sergeant William Ivy and his wife in 1896². After five ascents near Santiago, Cuba, it had become too riddled with holes to be of further use, but observations made there "may have been the determining factor in the capture of San Juan Hill" (Hennessy 1985:13). The war ended before a second company with two new balloons could be moved to the island (Hennessy 1985:13).

¹ Captive balloons are held in position by a tether attached to the ground. Balloons not tethered are called free balloons.

² An earlier balloon had been purchased in France in 1891 by Lieutenant William A. Glassford. Called the *General Myer*, it was exhibited at the Chicago World's Fair of 1893, then sent to the Signal Corps School at Fort Riley, Kansas. Later it was moved to Fort Logan, Colorado, where it was either destroyed in a storm or by improper inflation (Hennessy 1985:12-13).

Throughout the 1890s, Greely pushed for further appropriations that would allow the War Department to expand aeronautical operations, but Congress' only response was to include \$18,500 to build an administration building and balloon hangar at Fort Myer, Virginia, in the Deficiency Act of 9 February 1900. All the Army's balloon equipment was subsequently sent to Fort Myer, and a balloon detachment of 12 enlisted men was formed. By that time the Army had four balloons, five small signal balloons, five baskets, and a variety of other equipment necessary for ballooning. Much of this equipment had to undergo extensive repair or had to be replaced in 1903, when an attempt was made to include balloons in Army maneuvers (Hennessy 1985:14).

On 1 August 1907, before the Army had acquired any heavier-than-air craft, the Aeronautical Division, Office of the Chief Signal Officer, was established. This new division was in charge of "all matters pertaining to military ballooning, air machines, and kindred subjects" (Hennessy 1985:15; Hennessy does not indicate the source of this quotation), and this division is considered the basis for today's Air Force (Hennessy 1985:15). The following year all the balloon and hydrogen equipment that had been at Fort Myer was sent to Fort Omaha, Nebraska, where the Signal Corps soon also set up facilities for generating hydrogen. Experiments in balloon photography and radio communications were also conducted there. Dirigible Number 1, for which the Aeronautical Division had received an appropriation of \$25,000 shortly after its establishment, was delivered to Fort Myer in July, then sent to the Fort Omaha Air Station in 1909 to be used in flight training (Hennessy 1985:15-16). Several classes from the Signal School at Fort Leavenworth, Kansas, visited Fort Omaha between 1909 and 1912 for training in balloon operations and to inspect the hydrogen generating plant. But by 1912 Dirigible Number 1 had deteriorated beyond repair, and the Army's eye for aeronautics had become focused on the airplane. The Fort Omaha Air Station was abandoned on 4 October 1913, and all balloon education was consolidated at Fort Leavenworth (Hennessy 1985:19). Between that time and 1916, balloon operations were "eliminated as a service activity" (Hennessy 1985:162).

The Birth of Heavier-Than-Air Flight

The U.S. military was less tentative about becoming involved in heavier-than-air flight than it had been with its lighter counterpart—at least at first. Dr. Samuel Pierpont Langley was one of the first to build working motorized flying machines in the U.S. After two successful glider flights in 1896, a joint Army and Navy board examined Langley's planes and recommended the military fund Langley's research into motorized flight. With two \$50,000 allotments from the military and another \$20,000 from a private source, Langley built *Aerodrome A*. After two attempts to fly the machine in 1903 proved unsuccessful, however, the Board of Ordnance and Fortification refused to release further money (Hennessy 1985:20-21).

Orville and Wilbur Wright made the first flight in a motorized, heavier-than-air machine in 1903 (Hennessy 1985:23). After being approached by British representatives in late 1904, they twice contacted offices of the War Department (first the Board of Ordnance and Fortification, through their congressman; then the Secretary of War) "offering their invention to the United States" (Hennessy 1985:25). They were turned down, at least in part because of a misunderstanding of what the Wrights were actually offering. The two brothers did, however, eventually build the first plane for the U.S. That plane, Signal Corps Airplane Number 1, was formally accepted in August 1909, and the first pilots began training under the tutelage of the Wright brothers two months later (Hennessy 1985:25-28, 34, 36-37). Just prior to this, Lieutenant Thomas E. Selfridge piloted the *White Wing*, becoming the first U.S. Army officer to solo in a motorized flying machine (Hennessy 1985:37). As the winter of 1909 approached, the Army moved its plane from College Park to Fort Sam Houston, Texas, where the weather was warmer. An inexpensive wooden hangar was built on the parade grounds there, and flight training for a group of enlisted men began in February 1910 (Hennessy 1985:39).

The first attempts to apply airplanes to offensive military uses were made in 1910 by Lieutenant Paul Beck at Los Angeles, California, who improvised a bombsight to be tried out at the first flying meet held in the U.S. The deliveries of the bombs were not very accurate, but Beck continued his experiments with Lieutenant Myron Crissy of the Coast Artillery Corps, and developed a much improved sight in early 1911 (Hennessy 1985:45). Riley E. Scott also designed a sight at College Park the same year. Riley's moveable telescope, which could be adjusted for different speeds and altitudes, was similar in design to sights used even as late as World War II (Hennessy 1985:54).

Congress made its first appropriations for the acquisition of aircraft for the Army in March 1911—\$125,000 for fiscal year 1912, with one-fifth available in 1911—and the Signal Corps immediately ordered five planes (Hennessy 1985:40-42). Two were delivered to Fort Sam Houston, but an aerial accident, in which Lieutenant G.E.M. Kelly was killed, prompted the commanding general of the Maneuver Division to prohibit flying there³. Plans were already in progress to establish a flying school at College Park (Hennessy 1985:45) and in mid-1911 construction began on four hangars there. By the end of the year, the last of the five planes were delivered, all to the school at College Park, but winter again necessitated a move south. A private farm was leased near Augusta, Georgia, and four planes transferred, but harsh weather limited flying at that location. The Augusta camp was closed in April 1912, and all pilots and planes returned to College Park (Hennessy 1985:50, 54-58).

The availability of funding made 1912 and 1913 busy and productive years for air services. During maneuvers conducted near Bridgeport, Connecticut, in August 1912 the Army had an opportunity to try using airplanes in conjunction with ground troops (Hennessy 1985:62). The aviation detachment operated with both sides, "and it was found that in each case the airplanes gave the force to which they were attached a decided advantage over the opposition" (Hennessy 1985:71).

The College Park school had eight hangars by November 1912, but cold winters again encouraged a move elsewhere. Glenn Curtiss, maker of the Curtiss airplane and owner of the Curtiss Aeroplane Company at North Island (off the coast of San Diego, California), invited the Signal Corps to his flying school, so all the pilots and mechanics who flew and serviced Curtiss airplanes were sent there. The Wright pilots and mechanics were sent to Augusta, and the College Park school was closed in November 1912 (Hennessy 1985:73). This separation of the school encouraged rivalry between the two sections, which had become so intense by the fall of 1913 (with members of each clique taking dangerous chances to try to show they were more skilled than the other) that they had to be brought together as a single unit again. All personnel and equipment were moved to the government-leased portion of North Island, to what shortly became the Army's first permanent aviation school. Temporary buildings were erected and the area was named Rockwell Field. Negotiations to buy the island were begun in 1917, but the purchase was not authorized by Congress until 1919 (Hennessy 1985:86-91, 102).

Tense relations with Mexico in early 1913 prompted the establishment of an air camp in Texas City, Texas. The aviation troops ordered there were designated the First Aero Squadron, which became the first combat unit in the U.S. when it took part in the Punitive Expedition on the Mexican border (Hennessy 1985:74-76). However, it soon became clear that the U.S. would not be involved in border operations in 1913. Joint air-ground participation was practiced while the First Aero Squadron was stationed at Texas City (Army Air Forces Aid Society 1944:342), but all aviation operations there ceased later that same year, when the last of the air service personnel and equipment were transferred back to San Diego (Hennessy 1985:79).

It was also in 1913 that the first attempt was made to form a separate aviation branch of the military. House of Representatives Bill 28,728 proposed the new division, but many Signal Corps fliers felt that aviation had not developed sufficiently to warrant the creation of a separate arm of the service, and that if a separate air

³ Nearby Kelly Field, now Kelly Air Force Base, was named after Lieutenant Kelly (Hennessy 1985:45).

corps were then established, it would set military air capabilities in the U.S. back several years. Instead, House of Representatives Bill 5,304, which became law in on 18 July 1914, established the Aviation Section under the Signal Corps⁴, provided for its increase in size by 60 officers and 260 enlisted men, and set pay scales and qualifications (Hennessy 1985:109-110). This new Aviation Section

was established for the purpose of operating or supervising the operation of all military aircraft, including balloons and airplanes, all appliances pertaining thereto, and any signaling apparatus installed thereon, and for training officers and enlisted men in military aviation. The establishment of the Aviation Section gave to the air service its first definite status, for prior to the passage of this act there was no actual provision of law covering the duties of the Signal Corps with respect to aeronautics except that contained in the 2 March 1913 Act, which allowed the detail of not more than 30 officers of the line of the Army on air duty and provided 35 per cent extra pay for flying [Hennessy 1985:110].

THE EYES OF THE ARMY AND WORLD WAR I

Although there had been experiments with the use of airplanes in offensive operations, the only official function of aviation at the beginning of World War I in 1914 was "to serve as the eyes of the army" (Kennett 1990:15). The expansion to offensive involvement was begun by European pilots during the first weeks of World War I, when aviators on both sides attacked marching troops with whatever weapons they carried with them in their planes. Officials took note and soon began encouraging such actions (Kennett 1990:15). Bombs were first used in August 1914 by both Allied and Axis powers; German planes bombed Paris the same month. In none of these efforts were bombsights used. The design of the Riley Scott-developed sight first tried in 1911 was being further refined at North Island at this time (Hennessy 1985:125-127).

The U.S. would not become involved in the war until 1917, but the escalating hostilities prompted some increase in funding for aviation on the west side of the Atlantic even before the U.S. became involved. When, in late 1914, the Army was making its requests for fiscal year 1916, it asked for more than a million dollars for the Aviation Section. The Army planned to create two complete air squadrons of 16 planes each and have six additional planes for insular service, in addition to lighter-than-air equipment. The Secretary of War eliminated the lighter-than-air items requested, reduced other sections of the estimates, then sent a request for \$400,000 to Congress, an amount far less than what many European countries then had budgeted. In March 1915, the further reduced amount of \$300,000 was appropriated for aviation, far less than what was desired by the Air Service (Hennessy 1985:128).

The Chief Signal Officer had appeared in front of the House Committee on Military Affairs during the debate over funding to elaborate on what was needed. He described an adequate air force as composed of four squadrons of eight planes each, with an additional 18 planes to be used as replacements. Each squadron would also require 18 automobiles and tractors to transport parts, fuel, and troops. Ideally, each squadron would also have eight pilots, eight observers, four administrative officers, and 90 troops. This could be provided, he felt, at a cost of approximately \$250,000 per squadron (Hennessy 1985:128). These figures increased the following year, when new plans proposed that each squadron be composed of three companies of four planes to each company. Two of the companies would only operate reconnaissance planes, and the third would have two pursuit and two combat planes. The total cost grew to over \$4 million (Hennessy 1985:128-129; Maurer 1978a:37-39).

⁴ Many sources refer to this branch as the Army Air Service, or simply Air Service. Hennessy (1985:193) explains that "[i]n February [1915] the NACA [National Advisory Committee for Aeronautics] passed a resolution urging that the Secretaries of War and Navy designate the aeronautic divisions of the Army and Navy, 'Army Air Service' and 'Naval Air Service,' respectively, and that the aeronautic stations be termed 'air stations;' apparently these titles were put into use."

A portion of the First Aero Squadron was ordered away from North Island to Brownsville, Texas, in April 1915 to patrol the border with Mexico in an effort to deter Francisco (Pancho) Villa from crossing into the U.S. Although the squadron did not arrive until after Villa had begun to withdraw, this breakup of the unit became the first step in a reorganization of the unit. The initial two companies were discontinued, and the squadron divided into 12 sections—headquarters, supply, training, shop, and eight airplane sections—led by Captain Benjamin D. Foulois, who would serve as Chief of the Air Service, American Expeditionary Force, during World War I (Underwood 1991:13). At some point prior to the shipment of the First Aero Squadron to Brownsville, plans had been developed to create an aviation center at Fort Sam Houston, near San Antonio, Texas (Maurer 1978a:37). But quarters and other necessary buildings had not been completed by the time the First Aero Squadron was ready to leave Brownsville, so the 15 officers, 85 enlisted men, and eight airplanes were first sent to Fort Sill to engage in joint ground and air maneuvers with Field Artillery troops.

This assignment of the First Aero Squadron marks the beginning of the history of flight at Fort Sill and of the area encompassed by the proposed Post Field Historic District, although it was still two years before the area was actually designated as an air field. The First Aero Squadron arrived at Fort Sill in late July 1915 to participate in experimental control of artillery fire by aerial observation. Fort Sill thus became the first tactical station for the squadron (Griswold n.d.:n.p.), although the unit was only to remain at Fort Sill until its permanent base at Fort Sam Houston, Texas, was completed. The eight JN-2s of the First Aero Squadron were moved by rail to Oklahoma in July (Hennessy 1985:146, 149; Moore 1958:45), and the 15 officers and 85 enlisted men immediately began erecting “a mess hall, storehouse, and garage, laying water pipe, and installing telephone lines from the post [Fort Sill] to the camp” (Hennessy 1985:146). The first flight was made in the second week of August by Lieutenant J.C. Morrow (*The Lawton Constitution [LC]* 1915:n.p.). Frequent experiments in aerial observation were attempted between 15 August and 19 November. The high incidence of mechanical problems limited the success of the experiments in fire control (Hennessy 1985:147, 167; Moore 1958:45; Sheftick 1984:5), but these experiments did illuminate training problems. The squadron’s work there, according to Foulois, “clearly showed the futility of observation of artillery fire except by trained observers” and prompted him to recommend that a special training course for artillery observation be initiated (Hennessy 1985:147). His experiences there also made him feel that better planes and equipment were a necessity (de Shazo 1958:2). When the First Aero Squadron left Fort Sill, Foulois’ suggestion that the buildings constructed by the unit be retained for future use (Hennessy 1985:147) may have helped encourage the establishment of an airfield at the post. That camp was reported to have been located opposite the later “Post Field gate on Fort Sill Boulevard,” and the planes used the same area for takeoffs and landings that eventually became the Post Field airstrip (Swett 1958:n.p.).

Although the work of the squadron with the Field Artillery may have met with little success, a project in aerial photography had better results. Photos for the first aerial mosaic were taken and compiled during this time, using a Brock automatic camera. The work influenced “the redesigning of the Brock camera and further development of aerial cameras” (Griswold n.d.:n.p.; de Shazo 1958:2). Unfortunately, histories and encyclopedias of cameras and aerial photography do not mention either Fort Sill or the Brock camera. Further research into this apparently esoteric aspect of the history of Henry Post Airfield may uncover evidence that these operations were more important to aerial photography than they appear at this time.

With the construction of its home base nearing completion in the fall of 1915, the First Aero Squadron was ordered to move to Fort Sam Houston, and this time it was to fly rather than be transported overland. This flight of 439 miles was “the first attempted cross-country flight by an aero squadron of the United States Army, and the nation’s first massed formation flight of any appreciable distance” (Isbell 1962:52). On 19 November, the planes of the First Aero Squadron left Fort Sill on the first leg of their journey. After stopping in Wichita Falls, Fort Worth, Waco, and Austin, the unit completed the trip to their new permanent station on 26 November (Hennessy 1985:149-150; Isbell 1962:52; Johnston 1942:53).

When Francisco (Pancho) Villa finally did enter the U.S. in March 1916, he and his troops were chased out of New Mexico by the U.S. cavalry. Afterwards, Brigadier General John J. Pershing put together a force to protect the border and conduct a punitive expedition into Mexico. The First Aero Squadron was ordered to Columbus, New Mexico, to take part (Hennessy 1985:167)⁵, with what was perhaps an unexpected result. The inefficiency of the air forces that spring helped emphasize the needs of the U.S. aviation division, and at the end of March the Signal Corps received \$500,000 by way of an urgent deficiency act (Hennessy 1985:154). But the Signal Corps was soon to receive much more. Section 13 of the National Defense Act, passed 3 June 1916, increased the number of officers in the Aviation Section from 60 to 148 and removed age and marital status restrictions that had severely limited the number of men who could qualify for service in the section (Hennessy 1985:154-155). Additional benefits were provided by sections 37 and 55, which set up a Signal Officers Reserve Corps and Signal Enlisted Reserve Corps (Hennessy 1985:155). In July, the second Signal Corps flying school⁶ was established at Hazelhurst Field, Mineola, New York, and soon a third was established at Ashburn Field, near Chicago, Illinois (Hennessy 1985:177, 181; Table 1). In August additional funding was allotted as it became clearer that the U.S. would become involved in the war in Europe. On 29 August, Congress set aside more than \$13 million for use in military aeronautics and \$600,000 for the purchase of land for aviation use (Hennessy 1985:154-155).

By October, the Aviation Section had developed plans for a 24-squadron air force. Seven squadrons would be assigned to duties with the regular Army, 12 would work with National Guard divisions, and five would be used for coastal defense. Each squadron was to have 12 planes organized into three companies and a 14-member headquarters; each company was to have 45 men and four machines (Hennessy 1985:161). Balloon units were to be used in conjunction with both field and coastal artillery (Hennessy 1985:161). The Germans were by then using their Zeppelins for bombing, and all of the belligerents were finding balloons a great aid for reconnaissance. A balloon school was established at Fort Omaha in December 1916 (Hennessy 1985:19).

The U.S. declared war against Germany on 6 April 1917. At that time, the Army's air branch consisted of 131 division officers, 1,087 enlisted men, and less than 300 planes, all built as trainers rather than as combat machines (Hennessy 1985:196). By the end of June eight schools of military aeronautics had been established. Students were taught "the principles of aeroplane and engine construction and operation, radio-telegraphy, photography, bombs and bomb dropping and aerial observation" (*Aeronautics* 1918a:110). Fort Sill was added to the list of schools the following month (*LC* 1917a:1), and many more schools were established throughout the war.

In the summer of 1917 the War Department decided to locate a school for aerial observers at Fort Sill, to be operated in conjunction with the School of Fire there (War Department 1917:n.p.). The buildings and their organization would be based on those then in use at other aviation facilities, the site for the airfield to be selected by the commanding officer at Fort Sill (War Department 1917:n.p.).

The site chosen by the commanding officer for the field was the same flat area originally used by the First Aero Squadron in 1915, a broad plateau south of the old post area where the cavalry had grazed horses during the early years of the post's operation (Figure 3). The name chosen for the airfield was Post Field,

⁵ Although one article in *The Cannoneer*, a Fort Sill newspaper, stated that when the First Aero Squadron was ordered to take part in General Pershing's punitive expedition it was still stationed at Fort Sill (Sheftick 1984:5), a statement possibly derived from former Fort Sill museum director Gillett Griswold (Griswold n.d.:n.p.), this seems to be mistaken since the unit had moved to Fort Sam Houston a full four months prior to the receipt of orders to join General Pershing. The statement is directly contradicted by historian S.T. Moore (1958:44), who said the First Aero Squadron left Fort Sam Houston to join General Pershing in New Mexico.

⁶ The first flying school was that located at Rockwell Field, on North Island.

Table 1
Principal Army Aviation Facilities in the Continental U.S.,
1919-1939

Facility	Location	Jurisdiction*		Units Stationed at the Facility**	
		1919	1939	1926	1936
Baker's Field	Rochester, NY	DMA	----		1939
Barksdale Field	Shreveport, LA	----	GHQAF		
				HQ and HQ Squadron, 3d Wing Base HQ and 6th Air Base Squadron HQ and HQ Squadron, 3d Attack Group	HQ and HQ Squadron, 3d Wing Base HQ and 6th Air Base Squadron HQ and HQ Squadron, 3d Attack Group
				8th Attack Squadron 13th Attack Squadron 90th Attack Squadron 5th Photo Section HQ and HQ Squadron, 20th Pursuit Group	8th Attack Squadron 13th Attack Squadron 90th Attack Squadron HQ and HQ Squadron, 20th Pursuit Group
				55th Pursuit Squadron 77th Pursuit Squadron 79th Pursuit Squadron	55th Pursuit Squadron 77th Pursuit Squadron 79th Pursuit Squadron
Barron Field	Everman, TX	DMA	----		
Bolling Field	Anacostia, D.C.	DMA	AC	10th Corps Observation Squadron 99th Observation Squadron	99th Observation Squadron 3d Photo Section
Brindley Field	Commack, NY	DMA	----		
Brooks Field	San Antonio, TX	DMA	AC		
Call Field	Wichita Falls, TX	DMA	----		
Carlstrom Field	Arcadia, FL	DMA	AC(I)		
Carruthers Field	Benbrook, TX	DMA	----		
Chanute Field	Rantoul, IL	DMA	AC	15th Observation Squadron 5th Photo Section	
					22d Observation Squadron

Table 1 (cont'd)

Facility	Location	Jurisdiction*		Units Stationed at the Facility**	
		1919	1939	1926	1939
Chapman Field	Miami, FL	DMA	4th CA		
Crissy Field	San Francisco, CA	-----	9th CA(I)	15th Photo Section	91st Observation Squadron 15th Photo Section
Henry J. Damm Field	Babylon, NY	DMA	----		
Dayton Supply Depot and Acceptance Park	Dayton, OH	DMA	----		
Camp Dick	Dallas, TX	DMA	----		
Dorr Field	Arcadia, FL	DMA	AC(I)		
Duncan Field	San Antonio Air Depot, TX	----	AC		
East Field	Otay, CA	DMA	----		
Eberts Field	Lonoke, AK	DMA	----		
Eglin Field	Valparaiso, FL	----	AC		
Elizabeth Supply Depot and Acceptance Park	Elizabeth, NJ	DMA	----		
Ellington Field	Houston, TX	DMA	8th CA(I)		
Emerson Field	Camp Jackson, SC	FA	----		
Fairfield Air Depot	Patterson Field, OH	----	AC		

Table 1 (cont'd)

Facility	Location	Jurisdiction*		Units Stationed at the Facility**		
		1919	1939	1920	1926	1936
Florence Field	Fort Omaha, NB	DMA	---			1939
Garden City Supply Depot	Garden City, NY	DMA	---			
Gerstner Field	Lake Charles, LA	DMA				
Godman Field	Fort Knox, KY	FA	Fifth CA			
Gray Field	Fort Lewis, WA	---	Ninth CA			12th Observation Squadron (less Flight C—see Post Field)
Camp Greene	Charlotte, NC	DMA	---			91st Observation Squadron 3d Balloon Squadron
Hamilton Field	San Rafael, CA	---	GHQAF			Base HQ and 5th Air Base Squadron HQ and HQ Squadron, 7th Bombardment Group 9th Bombardment Squadron 11th Bombardment Squadron 31st Bombardment Squadron 88th Reconnaissance Squadron
Hazelhurst Field	Mineola, NY	DMA	---			
Hiestand Field	Fort Myers, FL	DMA	---			
Houston Supply Depot	Houston, TX	DMA	---			
Indianapolis Repair Depot	Indianapolis, IN	DMA	---			

Table 1 (cont'd)

Facility	Location	Jurisdiction*		Units Stationed at the Facility**		
		1919	1939	1920	1926	1936
Kelly Field	San Antonio, TX	DMA	AC	HQ 1st Day Bombardment Group 11th Bombardment Squadron 20th Bombardment Squadron 96th Bombardment Squadron 166th Bombardment Squadron 2d Photo Section HQ 1st Pursuit Group 27th Pursuit Squadron 94th Pursuit Squadron 95th Pursuit Squadron 147th Pursuit Squadron		1939
Langley Field	Hampton, VA	DMA	GHQAF	HQ 1st Army Observation Group 50th Observation Squadron 88th Observation Squadron 7th Photo Section 19th Airship†† Company 19th Airship†† Company	HQ 2d Wing HQ 2d Bombardment Group 11th Bombardment Squadron 20th Bombardment Squadron 96th Bombardment Squadron 2d Photo Section 59th Service Squadron 20th Bombardment Squadron 50th Observation Squadron 20th Photo Section	HQ and HQ Squadron GHQ Air Force HQ and HQ Squadron, 2d Wing Base HQ and 1st Air Base Squadron HQ and HQ Squadron, 2d Bombardment Group 20th Bombardment Squadron 49th Bombardment Squadron 96th Bombardment Squadron 21st Reconnaissance Squadron 2d Photo Section HQ and HQ Squadron, 8th Pursuit Group 33d Pursuit Squadron 35th Pursuit Squadron 36th Pursuit Squadron 37th Attack Squadron
Lawson Field	Fort Benning, GA	---	Inf			(Under Infantry School) 16th Observation Squadron, Flight B
Lee Hall Balloon School	Lee Hall, VA	DMA	---			
Little Rock Supply Depot	Little Rock, AR	DMA	---			
Los Angeles Supply Depot	Los Angeles, CA	DMA	---			

Table 1 (cont'd)

Facility	Location	Jurisdiction*		Units Stationed at the Facility**	
		1919	1939	1926	1936
Love Field	Dallas, TX	DMA	---		1939
Lowry Field	Denver, CO	---	AC		
Lufbery Field	Wantagh, NY	DMA	---		
McCook Field	Dayton, OH	BAP	---		
March Field	Riverside, CA	DMA	GHQAF		
				HQ and HQ Squadron, 1st Wing Base HQ and 4th Air Base Squadron HQ and HQ Squadron, 17th Attack Group 34th Attack Squadron 73d Attack Squadron 95th Attack Squadron HQ and HQ Squadron, 19th Bombardment Group 30th Bombardment Squadron 32d Bombardment Squadron 38th Reconnaissance Squadron 23d Photo Section	HQ and HQ Squadron, 1st Wing Base HQ and 4th Air Base Squadron HQ and HQ Squadron, 17th Attack Group 34th Attack Squadron 73d Attack Squadron 95th Attack Squadron HQ and HQ Squadron, 19th Bombardment Group 30th Bombardment Squadron 32d Bombardment Squadron 38th Reconnaissance Squadron (Under Cavalry School) 1st Observation Squadron
Marshall Field	Fort Riley, KS	---	Cav	16th Observation Squadron 9th Photo Squadron	
Mather Field	Sacramento, CA	DMA	GHQAF	9th Corps Observation Squadron	
Maxwell Field	Montgomery, AL	---	AC	22d Observation Squadron (pt) 4th Photo Section	
Middletown Air Depot	Middletown, PA	DMA	AC		
Mitchel Field	Garden City, NY	DMA	GHQAF	HQ 9th Observation Group 61st Service Squadron 5th Observation Squadron 14th Photo Section 1st Observation Squadron 8th Photo Section	Base HQ and 2d Air Base Squadron HQ and HQ Squadron, 9th Bombardment Group 1st Bombardment Squadron 5th Bombardment Squadron 99th Bombardment Squadron 18th Reconnaissance Squadron 8th Photo Section
Moffett Field	Sunnyvale, CA	---	9th CA		82d Observation Squadron

Table 1 (cont'd)

Facility	Location	Jurisdiction*		Units Stationed at the Facility**	
		1919	1939	1926	1936
Fort Monroe Balloon Station	Fort Monroe, VA	CA	---		1939
Montgomery Repair Depot	Montgomery, AL	DMA	---		
Muroc Bombing Field	Muroc, CA	---	GHQAF		
Camp Morrison	Newport News, VA	DMA	---		
Morrow Field	Detroit, MI	DMA	---		
Olmsted Field	Middletown, PA	---	AC		
Park Field	Millington, TN	DMA	---		
Park Place	Houston, TX	DMA	---		
Patterson Field	Fairfield, OH	---	AC		
Payne Field	West Point, MS	DMA	---		
Penn Field	Austin, TX	DMA	---		
Phillips Field†	?	?	?	49th Bombardment Squadron	
Pope Field	Fort Bragg, NC	FA	Fourth CA	22d Observation Squadron (po)	16th Observation Squadron (less Flight B) 2d Balloon Squadron
Post Field	Fort Sill, OK	DMA	FA	(Under Fort Sill, Field Artillery School) 135th Observation Squadron 23d Balloon Company††	(Under Field Artillery School) 44th Observation Squadron 23d Photo Section
Randolph Field	San Antonio, TX	---	AC		
Ream Field	Oneonta, CA	DMA	---		

Table 1 (cont'd)

Facility	Location	Jurisdiction*		Units Stationed at the Facility**		
		1919	1939	1920	1926	1936
Reilly Field	Camp McClellan, AL	FA	---			1939
Rich Field	Waco, TX	DMA	---			
Richmond Supply Depot	Richmond, VA	DMA	---			
Rockwell Field	San Diego, CA	DMA	---			
Roosevelt Field	Mineola, NY	DMA	---			
Ross Field	Arcadia, CA	DMA	---			
Sacramento Air Depot	Sacramento, CA	---	AC			
Sacramento Supply	Sacramento, CA	DMA	---			
San Antonio Air Depot	San Antonio, TX	---	AC			
San Francisco Supply Depot	San Francisco, CA	DMA	---			
Scott Field	Belleville, IL	DMA	AC			
Selfridge Field	Mt. Clemens, MI	DMA	GHQAF			
					HQ 1st Pursuit Group 17th Pursuit Squadron 27th Pursuit Squadron 94th Pursuit Squadron 95th Pursuit Squadron 57th Service Squadron	
					15th Observation Squadron	
					Base HQ and 3d Air Base Squadron HQ and HQ Squadron, 1st Pursuit Group 17th Pursuit Squadron 27th Pursuit Squadron 94th Pursuit Squadron	
Sherman Field	Fort Leavenworth, KS	---	C&GSS			
Souther Field	Americus, GA	DMA	---			

Table 1 (cont'd)

Facility	Location	Jurisdiction*		Units Stationed at the Facility**	
		1919	1939	1926	1936
Taliaferro Field	Hicks, TX	DMA	---		1939
Taylor Field	Montgomery, AL	DMA	---		
Valentine Field	LaBelle, FL	DMA	---		
Waco Camp	Waco, TX	DMA	---		
Fort Wayne	Detroit, MI	DMA	---		
Camp John Wise	San Antonio, TX	DMA	---		
Wright Field	Dayton, OH	---	AC		
Wilbur Wright Field	Fairfield, OH	DMA	---		

88th Observation Squadron
7th Photo Section

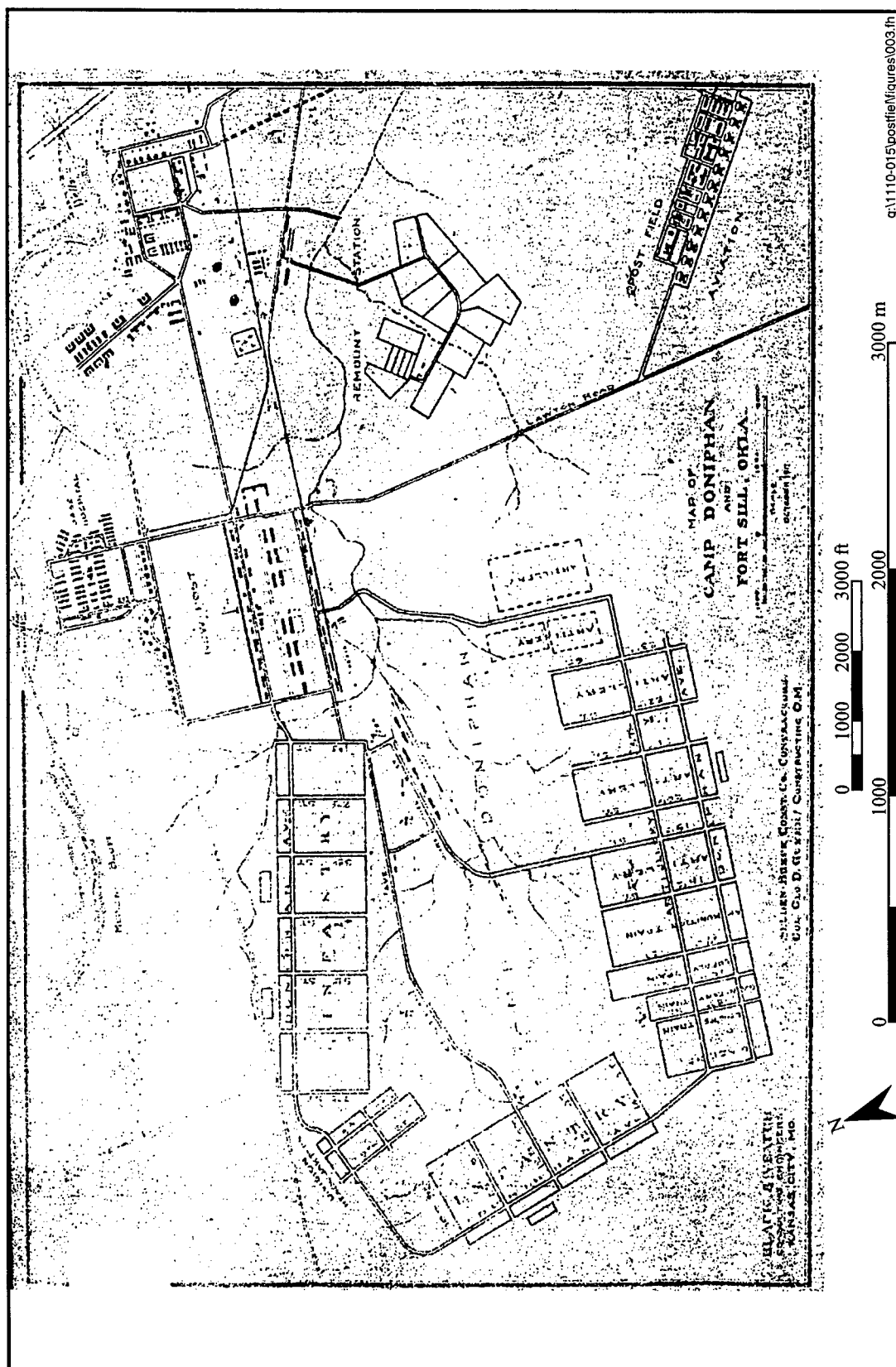
* AC = Air Corps; BAP = Bureau of Aircraft Production; C&GSS = Command and General Staff School; CA = Corps Area; Cav = Cavalry; DMA = Division of Military Aeronautics; GHQAF = General Headquarters Air Force; FA = Field Artillery; (I) = inactive; Inf = Infantry

** The units and forces stationed at the facility for 1920, 1926, 1936, and 1939 are listed below the facility. Units and forces stationed at locations other than air bases not listed.

† Not listed among the principal facilities

†† In 1920, other balloon and airship companies were located at stations not listed among the principal facilities: 8th Airship Company, Camp Bierne, location not known; 14th Balloon Company and 24th Balloon Company, Camp Lewis, location not known; 31st Balloon Company, Camp Knox, location not known; 32d Balloon Company, Camp Benning, location not known; 18th Balloon Company, Aberdeen, MD

Source: Maurer 1987:451-473



in honor of Second Lieutenant Henry B. Post, 25th Infantry, who had been killed in a plane crash three years earlier during an attempt to break the altitude record (Griswold n.d.:n.p.; Nye 1969:331; Sheftick 1984:5; Spivey, informal interview 1995).

The 1917-era construction at Post Field was organized by the Third Aero Squadron, part of the original First Aero Squadron. The Third Aero Squadron had been stationed at Kelly Field Number 1; “[w]hen it was decided to open a flying field at Fort Sill the Third Squadron was sent here to do the job” (*High Life* 1918a:n.p.). The plans for the buildings constructed there originated with Colonel C.G. Edgar, Aviation Section, Signal Corps, who had traveled to Canada’s Camp Borden to learn about the construction and organization of flying fields in that country. “In Edgar’s opinion, based on what he saw at Camp Borden, each aviation training plant or unit camp should consist of 54 buildings: a series of hangars, machine shops, schoolhouse, administration buildings, garage, one or two airplane repair buildings, barracks for troops and for cadets, an officers’ mess hall, officers’ quarters, commanding officer’s house, guardhouse, bakery, quartermaster’s stores, and aero stores” (Freeman 1994:L-24). After his return from Canada, Edgar hired Albert Kahn to develop architectural plans for 54 such standardized buildings, all of which were complete within 10 days. “These plans, together with the layouts for the aviation camps, then became the standard for almost all air fields built by the Air Service in the United States during 1917-1918” (Freeman 1994:L-25).

The World War I phase of construction at Post Field began 8 August 1917 (Griswold n.d.:n.p.), and by the latter half of August 1,000 construction employees were on the job. Captain H.R. Eyrich, who had overseen the construction of Selfridge Field, at Mount Clemens, Michigan, served as Construction Superintendent, and the Selden-Breck Construction Company built the buildings (*High Life* 1918b:n.p.). The airfield would be large enough to accommodate a two-squadron school and was to include 12 hangars. Since it was to have 54 buildings (*LC* 1917a:1), the plans for the layout and possibly the individual buildings may have been based on those developed by Kahn under Edgar’s direction. However, in the interest of quicker and cheaper construction during mobilization, the standard designs may have been altered somewhat as the buildings were later described as “a series of one-storied, tar-paper covered shacks and temporary hangars” (*The Field Artillery Journal* 1933:540)—probably not what Kahn and Edgar had designed. The title of the blueprint set used was Signal Corps Mobilization Camp Blueprints (Bamberger 1918:2).

The facility was expanded to include a balloon observation school in mid-September, and 21 additional buildings were planned—including nine balloon hangars, barracks, mess halls, and storage facilities. All were to be constructed north of the aviation school buildings, also by the Selden-Breck Construction Company. One local newspaper noted that, if it were developed as planned, the Fort Sill school would “rank with the largest in the country” (*LC* 1917b:1). However, it is unlikely all the buildings noted above were built since later sources (Bamberger 1918:5; Bleakley 1929:n.p.; Brereton et al. 1929:1) only mention four balloon hangars as being constructed during this period. Balloon Company A, composed of 93 men, arrived at Fort Sill on 24 September from Fort Omaha. The men occupied the Number 11 Hangar of the aviation school until the balloon company barracks were finished (*LC* 1917b:1, 1917c:1; Wilson 1985:n.p.). Most of the buildings had been completed by May 1918 (*High Life* 1918b:n.p.).

Courses at the schools covered a wide range of topics. In the balloon school, courses included observation from captive balloons, radio communication, map making, and fire control. The first students of balloon observation traveled from Fort Omaha to Fort Sill in September 1917, a company of two officers and 91 men (*LC* 1917b:1, 1917c:1). The precise date of the first aircraft observers’ courses at Post Field is not known, but by February 1918, a two-week course in aerial observation was being conducted, which offered training in artillery organization, targets and tactics, and principles of observation (Sunderland 1942:68). In the summer, the organization of the courses took the shape it would have for the remainder of the war. The Department of Gunnery offered classes in Observation of Fire and Corrections; the Department of Reconnaissance offered classes in Air Photography (Swett 1921:n.p.). And in August 1918, a seven-week course for cadets in aerial observation was instituted. During the remainder of the war, 515 students

graduated from the 12 classes offered (Swett 1921:n.p.). The school's name was changed from the School for Aerial Observers to the Air Service Flying School in 1918 (*High Life* 1918b:n.p.).

The importance placed on aerial balloon observation by military leaders is evident in a proposal for funding submitted to Congress in 1918, in which the Secretary of War asked Congress for \$3.5 million to establish 20 balloon stations in the U.S. (*Aeronautics* 1918b:172). Although the requested funding for development related to balloons was smaller than that related to aircraft⁷, the figure shows there was significant interest among the U.S. military in the use of balloons during World War I. The advantage of the balloons then in use was that they could ascend to as high as 4,500 feet and remain aloft for hours, allowing observers to watch for enemy fire, aircraft, and troop movements, as well as guide friendly troops and fire. Disadvantages included their size, the difficulty with which ground crews handled them, and the great amount of attention the silk envelopes required. The bulky equipment needed for the generation and storage of hydrogen was also a problem. In addition to inconveniences, balloons could also be dangerous. Lack of control over free balloons had always been a problem in military uses. With the invention of the rifle, they became much more vulnerable to ground fire, less of a problem in the days of muskets. And with the development and greater use of the airplane, they were sitting ducks for fire from the air as well as from the ground (Currey 1984:12-13).

Although funding was available for the purchase of planes and engines, the difficulty of procuring these items during the first year of American involvement in the war prompted perhaps a great change in Army air forces organization. Problems were attributed to slow channels of communication between factories and theaters of operation, augmented by a lack of "centralization . . . [and] quality control at the factories" (MacCloskey 1967:20). In an effort to rectify the problem, Congress passed the Overman Act on 20 May 1918, which removed the Army's aeronautics branch from the Signal Corps. Major General William L. Kenly became the Director of Military Aeronautics, in charge of both training and operations in the new military branch, officially called the Air Service, U.S. Army. Production of planes, engines, and related equipment was passed to the Army's Bureau of Aircraft Production (Currey 1984:26; Hennessy 1985:154; MacCloskey 1967:20-21).

Due to the limited number of pilots, mechanics, observers, and various support personnel (as mentioned above, there were only about 1,100 enlisted troops in the Army air forces when the U.S. declared war), education of new troops was a major function of the Air Service. In addition to the flight schools set up by the Air Service, colleges around the nation offered courses at ground schools, in which cadets began their training (Maurer 1987:53). In May aerial photography schools were operating at Fort Sill, as well as at Langley Field (Hampton, Virginia) and at Cornell University. These were consolidated into one school at Rochester, New York, shortly thereafter (*Aeronautics* 1918c:416). Fort Sill was also one of at least two fields where aeronautics troops were sent to train in conjunction with artillery troops (*Aerial Age Weekly* 1918:1, 215).

The first Army observation unit to serve overseas was the 91st Squadron, which began operations on 6 June 1918, in the Toul sector of the front in France (Maurer 1978b:3). Nine of the observers had been in the air less than 10 hours before being sent to the front. All but one of the remainder had received training at the 1st Corps Observation Training Center at Gondrecourt, France, the exception having received training at the observation school at Fort Sill (Maurer 1978b:266-267).

In 1918, air support of ground forces was being used "to a degree inconceivable four years before. A major offensive such as that launched by the British in August of that year at Amiens was supported by eight

⁷ The \$3.5 million for balloon stations was one portion of a \$50 million request aimed at improving air bases in the U.S. and its territories—\$24 million would be used to build 16 air stations in the U.S.; about \$10 million would be used for air bases in Panama and Hawaii; and \$12 million would be used to equip the new facilities (*Aeronautics* 1918b:172).

hundred aircraft that followed an elaborate air plan" (Kennett 1990:15). U.S. air forces, however, were relatively late arrivals on World War I fronts, and they played a significant role in only the last battles of the war (Kennett 1990:42). Conversely, World War I played a huge role in the development of U.S. air forces and the establishment of bases (Figure 4). One of the most dramatic figures evidencing the growth of this branch of the military is the number of planes built for the Army during the war years—of the approximately 14,300 planes received by the Army prior to 1 November 1919, almost 13,900 had been ordered after 6 April 1917, when the U.S. declared war on Germany (Hennessy 1985:197).

During World War I, aerial reconnaissance was carried out primarily by non-pilot observers trained in the direction of artillery fire. Fort Sill as a whole and Post Field in particular were important during the war effort since reconnaissance and observation training was centered there, under the direction of the Field Artillery, whose School of Fire was located at Fort Sill. After Armistice, the Air Service took over responsibility for such training, and the location was moved to Kelly and Brooks fields, San Antonio, Texas (Greer 1983:616). None of the buildings related to Post Field's World War I-era operations remain standing.

THE POST WORLD WAR I YEARS—STRUGGLE FOR GROWTH

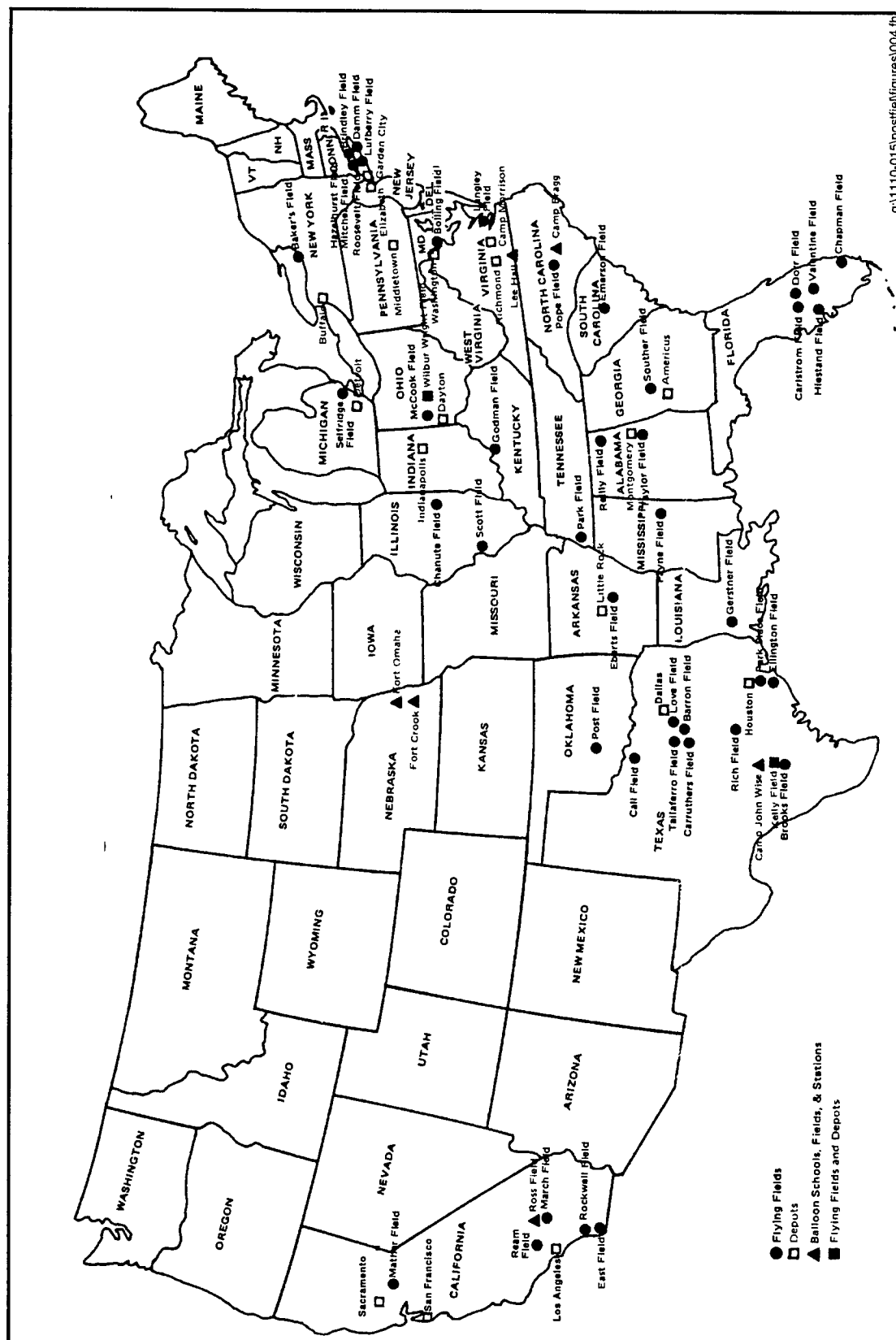
With the end of the war, the U.S. air forces began converting to a peacetime force. During the next two decades, "routine training characterized the Army air arm's work" (Maurer 1987:443), with minimal variety provided by exercises and maneuvers. The few military operations that involved aviation units included the occupation of Germany after Armistice and patrols along the U.S.-Mexico border to prevent raids and smuggling. More often, the Army air arm's non-routine actions were of a civil nature.

They flew missions to: aid victims of floods, earthquakes, and other natural disasters; search for lost persons; provide aerial ambulance service for people sick or injured; patrol national forests to report fires; and take aerial photographs for the U.S. Geological Survey. Army airmen refined techniques for aerial crop dusting, helped eradicate mosquitoes and other pests, and bombed lava from an erupting volcano to divert the flow from a town that lay in its path. They contributed greatly to the establishment and development of a nationwide system of airports, landing fields, and airways—benefiting civil aviation as much, if not more, than military aviation. Now and then the Army furnished men and equipment for scientific studies and experiments [Maurer 1987:443-444].

All ground schools at American colleges were closed by February 1919, and most of the fields where cadets had received primary flight training were converted to storage depots. A number of the flying fields, supply and repair depots, balloon stations, schools, acceptance parks, and various other installations set up during the war, many of which had been established temporarily on leased land, were abandoned. Peacetime primary flight training, which had been given at 15 different fields during the war, was consolidated at Carlstrom and March fields. Classes began in January 1920 (Maurer 1987:10, 53). Although it was scaled down, training continued to be

one of the chief functions of the U.S. Army Air Service, consuming a great deal of money, people, equipment, and time. Such training encompassed pilots, observers, mechanics, radio operators, other technicians and specialists, engineers, and doctors. After demobilization and the adjustments imposed by personnel ceilings and fund limitations, the Air Service opened a number of schools [Maurer 1987:53].

One school still in operation was the Air Service Observation School at Post Field. Demobilization caused severe personnel shortages at this and in many other Air Service operations (Maurer 1987:9). In the Fort Sill area the shortage was in part due to the lack of labor in general and the high wage rates at local farms and oil fields. Recruiting parties sent into the local areas met with little success (Maurer 1987:9).



A national campaign to combat losses and gain recruits was begun in the spring of 1919. Wage increases were used as one inducement. At that time, the average base pay for a sergeant, benefits included, came to about \$1,500 per year. Pay in the Air Service compared quite favorably to the \$885 average annual income of a typical civilian between the ages of 20 and 25 (Maurer 1987:6-7). Air shows were used to arouse interest in joining the forces and as a means of increasing public support in this heyday of early aviation (Maurer 1987:17).

The U.S. Army Air Service found that a country fair, a horse show, a patriotic meeting—any large gathering of people—could be grasped as the occasion for an air show. With no such event scheduled, the sound of planes and the prospect of some stunts seemed reason enough for a crowd to gather. The Air Service encouraged units and stations to put on such performances and report them along with their cross-country flights and other newsworthy activities to Washington for a newsletter to be distributed in the Air Service and released to the press [Maurer 1987:17-18].

One of the more unusual stunts was called parachute hopping; at Post Field, Sergeant Encil Chambers “jumped from 5,000 feet, opened his chute at 4,000, cut loose at 3,000, dropped another 500 feet, opened his second chute, and executed a ‘neat’ landing in the middle of the field” (Maurer 1987:161-162).

Many of the American pilots who participated in World War I needed no such theatrics to win them over, at least to the military value of the airplane (MacCloskey 1967:25). Two important testaments written “to distill the experience and [serve] as repositories for ideas” (Kennett 1990:42) were Lieutenant Colonel William C. Sherman’s *Tentative Manual for the Employment of Air Service*, and General William (Billy) Mitchell’s *Provisional Manual of Operations of Air Units*. Mitchell’s manual devoted an entire section to the organization and use of air power with ground attack squadrons, a concept that would later be implemented when air force troops were made organic components⁸ of ground units. Both took as implicit the idea that at times the entire weight of the air forces should be brought to bear upon ground operations, but that in usual wartime operations air forces would be better used elsewhere (Kennett 1990:42).

Many participants in the war also supported an entirely separate aviation branch of the military. Plans and suggestions for the future organization of military aviation were put forward, often evidencing personal agendas. In what was known as the Cromwell Mission, Secretary of War Newton D. Baker put together a group “composed of men with broad experience in aviation” (MacCloskey 1967:25) and sent them to Europe to investigate the advantages and disadvantages of a separate air service. They “unequivocally endorsed a separate department for air” (MacCloskey 1967:25). Yet a separation was still not effected. Under the Army Reorganization Act of 1920, the Air Service became “a combatant arm of the Army with an authorized strength of 1,516 officers, 16,000 enlisted men, and 2,500 flying cadets—out of a total of 280,000 men for the entire Army” (MacCloskey 1967:25).

In 1919, after demobilization, the War Department authorized the formation of 42 lighter-than-air craft companies, including school detachments. A shortage of personnel made that figure unattainable, and by mid-1920 only two airship and 10 balloon companies, and a number of school units had been formed (Maurer 1987:70). There were three balloon schools in the U.S. in 1919, all of which trained observers—at Lee Hall, Virginia; Brooks Field, San Antonio, Texas; and Ross Field, California. Recruits were sent to Brooks Field, while enlisted men were sent to the other two schools. In 1920, the number of students was small enough that instruction was concentrated at Ross Field (Maurer 1987:59). Congress began reducing the size of the Army in early 1921, and further reductions during 1922 caused the loss of all of the balloon companies (Maurer 1987:70-71), but lighter-than-air pilot training continued. Scott Field, Belleville, Illinois, was established as a depot for lighter-than-air supplies and equipment in 1922, and experimental work then being

⁸ An organic unit is one which is “[b]uilt into, or specially adapted to a given military organization” (Heflin 1956:362).

conducted at Fort Omaha was transferred to McCook Field, Ohio. The Balloon and Airship School at Scott Field offered training in the operation of captive balloons and the piloting of airships (Maurer 1987:61).

Although the primary training school for fire control had been transferred to San Antonio bases after the war's end, the Air Service Observation School continued to operate at Post Field (Anonymous 1921:1; Maurer 1987:9). All students had to have completed primary pilot training before coming to this advanced school for the three- to six-week training course (Anonymous 1921:4). A brochure discussing the Fort Sill schools in some detail describes the mission of the observation school at this time as "the technical training and instruction of Air Service officers and flying cadets in aerial observation, and the employment of heavier than air craft in observation in time of war; [the school was] to perfect a thorough and comprehensive [sic] course of training in aerial observation in time of peace; to train officers and flying cadets to become proficient both as observation pilots and as observers; and to secure close liaison and cooperation with other arms of the service" (Anonymous 1921:1). This school was discontinued for the 1921-1922 school year, yet in 1921 Post Field aviators still flew more miles than their colleagues at any other U.S. field (Griswold n.d.:n.p.). The observation school was reestablished at Kelly Field in 1922 (Maurer 1987:64).

The fight for a separate air force was taken up loudly and with great emotion by General Billy Mitchell in 1920, when he began serving as Assistant Chief of the Air Service. His very public campaign for a separate air branch earned him a court martial, brought on charges under the 96th Article of War. He resigned from the Army shortly after being found guilty, but his crusade helped bring the issue to the attention of Congress⁹ (MacCloskey 1967:26). In 1924, the House of Representatives' Lambert Committee began investigating aeronautics in the military, and at the end of 1925 recommended that the armed forces be reorganized to incorporate "a single Department of Defense with equal representation for ground, naval, and air forces" (MacCloskey 1967:27). However, another committee, appointed by President Calvin Coolidge, opposed this idea and recommended instead that the Air Service be renamed the Air Corps, that the branch have representation on the General Staff, and that an Assistant Secretary of War for aviation be appointed (MacCloskey 1967:27).

The Air Corps Act of 2 July 1926 formally renamed the Army's aviation branch the Air Corps, created an Assistant Secretary of War (for Air), set up an air section in each General Staff division of the Army, and authorized the expansion of the Air Corps over the next five years to include approximately 1,500 officers, 2,500 cadets, 16,000 enlisted troops, and 1,800 aircraft (Currey 1984:26; MacCloskey 1967:27; Maurer 1987:191-192). Funding for the expansion was not made available at hoped-for levels, however, and the Air Corps "remained a combatant branch of the Army—but with much less prestige than the others" (MacCloskey 1967:27).

Major General Mason M. Patrick, then Chief of Air Service, became Chief of Air Corps when the Act took effect, and Frederick Trubee Davison, who had flown with the U.S. Naval Air Service, became the Assistant Secretary of War for the U.S. air forces (Maurer 1987:192-193). The War Department estimated the Air Corps would need a budget of approximately \$31 million for each of the five years of expansion (July 1926 through June 1931, fiscal years 1927 through 1931), then about \$26 million a year thereafter. Since the Air Corps Act itself provided no funds, appropriations would have to come annually from Congress. A shortage of funds caused the program to be delayed one year (Maurer 1987:197-198).

⁹ Mitchell is both praised and chastised for his efforts. In contrast to what many would call a positive effect of his actions—bringing the need for more funding to the attention of Congress—historian Jeffery Underwood (1991:45) states that "[i]n 1934, Brigadier General Kilbourne complained that for 'many years the General Staff of the Army has suffered a feeling of disgust amounting at times to nausea over statements publicly made by General William Mitchell and those who followed his lead.' He believed that Mitchell and his followers made unsubstantiated claims about the effectiveness of air power to get preferential treatment over the other arms. . . . 'This course of action led many officers to instinctively close their minds to perfectly legitimate and honest claims' made by the Air Corps."

Technological developments associated with virtually all types of military equipment and areas of operation pushed the costs of funding the armed forces in the latter half of the 1920s higher than planners had expected. Excitement about such innovations was tempered by resistance to increased funding for military programs coming from Congress and the public, this friction generated by the spirit of isolationism and pacifism that blossomed during the post-Great War period. For fiscal year 1928, the Air Corps was appropriated \$20.6 million, about one-third more than it received in recent years, but about a third less than it had requested. The first-year increment of the expansion, however, was accomplished. The following year the Air Corps requested \$36.5 million and received \$24.6 million. Second-year increment objectives were not completed—the Air Corps fell short in procuring housing, equipment, and senior officers (Maurer 1987:199-200).

To make up for deficiencies, the Air Corps asked for \$77.5 million for fiscal year 1930, but only received \$34.7 million. Brigadier General James E. Fechet, then Chief of Air Corps, reported that again the lack of funding had prevented the Air Corps from reaching its expansion objectives, but Secretary of War Patrick J. Hurley reported to President Herbert Hoover that “progress had been ‘normal’ and the program had been budgeted to completion in Fiscal Year 1932” (Maurer 1987:201). In 1929, a week before appropriations were made for fiscal year 1931, prices plunged on the stock market, but it would still be some time before the full significance of the event would be understood. The Air Corps received \$35.8 million for fiscal year 1931, but as the severity of the economic situation became more apparent President Hoover asked the War Department to defer funding, which it agreed to do. The Air Corps resisted any cut in its allocations; in the end the air arm was allowed what originally had been allocated to it, although \$2 million had to be diverted from other branches of the military. In the last year of the expansion program, the Air Corps spent less than \$30 million.

The five-year plan was concentrated on the improvement of heavier-than-air capabilities, so there was little development of the balloon and airship sections of the Air Corps. The Depression help assure a similar lack of development into the mid-1930s. Three barrage balloons were ordered and tested at Langley Field in 1927, and defense plans for the Panama Canal called for the use of 74 barrage balloons. Competition for funds discouraged interest, however, and balloons were soon dropped from Canal defense plans. Pilots and others involved in lighter-than-air aviation “did not abandon all hope of reviving the dying service” (Maurer 1987:373), but their plans and proposals received little support. Some of that support was in evidence at Post Field, as discussed below.

There was little activity at Post Field for several years after 1922, when the Air Corps Observation School was moved to Kelly Field, but the station was involved in a few important events. The first official U.S. airmail delivery was flown from Wichita, Kansas, to Lawton in 1923 by a Lieutenant Rich of Post Field (LC 1923a:n.p.). And planes, aviators, and at least one dirigible came from fields around the country to take part in maneuvers in conjunction with the Field Artillery in 1923 and 1924 (LC 1923b:n.p., 1924:n.p.).

In 1927 there were only two pilots and about a dozen enlisted men at Post Field (*The Guidon* 1927:n.p.), which looked much the same then as it had at the end of World War I (Figure 5). Changes were underway by 1 June 1928, by which time the 88th Observation Squadron had been organized and began operations at the station. By the end of August, seven planes and 130 men were at Post Field; two more planes were on their way, one of which was “a photographic ship . . . so designed and equipped that a picture can be taken in the air and while the ship is flying around the picture may be developed and dropped to the ground within 15 minutes after the exposure” (*The Guidon* 1928a:n.p.). The 88th was joined in July 1929 by the First Balloon Company, an outgrowth of the War Department’s wish to reestablish balloon companies to work in conjunction with field and coastal artillery. To accomplish this, the two airship companies then stationed at Scott Field were dissolved to free up enough personnel to form two balloon companies. One of these, the First Balloon Company (Parker 1934:5), was sent to Post Field, the other being assigned to Fort Bragg,

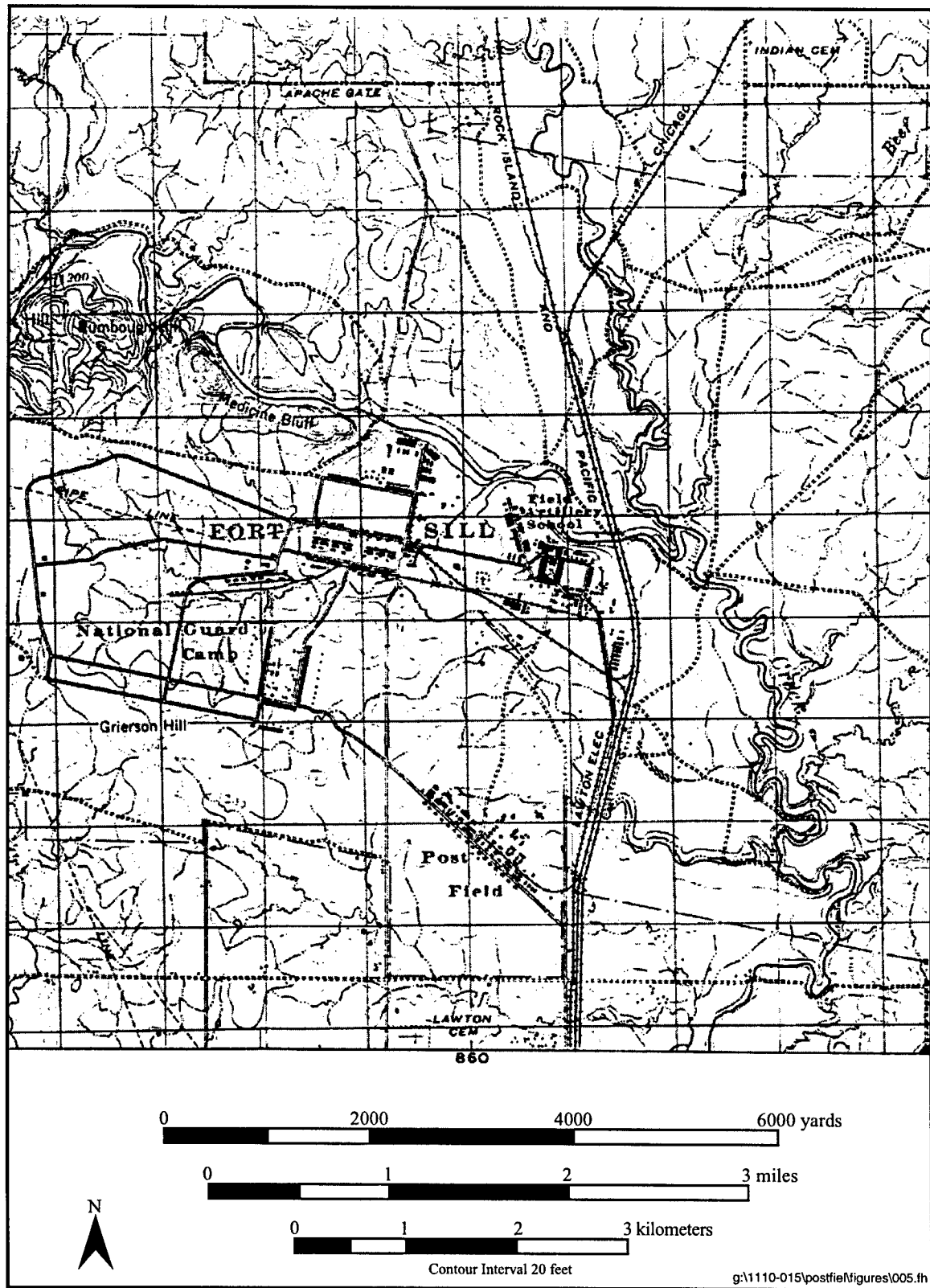


Figure 5. Post Field as it appeared in 1927 (from U.S. Army Corp of Engineers 1927).

North Carolina¹⁰. During the decade after the end of World War I there had been virtually no ballooning at Post Field. Frank Clark, who served in the First Balloon Company during this period, said both barrage and observation balloons, all most likely captured balloons rather than free balloons, were used at Post Field. Three winch trucks were available for use with the barrage balloons. Usually only one balloon was in use at any one time, with one or two held in reserve as spares (Clark 1985:1-2; Maurer 1987:217; Wilson 1985:n.p.).

At the close of fiscal year 1932, and the close of the five-year program of expansion, the Air Corps was still short of officers, enlisted men, airplanes, and tactical units. Although Air Corps leaders primarily blamed the failure to meet their goals on the lack of adequate funding (the corps had received only \$147.2 million of the \$260.6 million it had asked for), it should be noted that the monies they received were only slightly below the \$156.2 million originally projected to be the cost of the five-year expansion (Maurer 1987:200-202).

Funding continued to be sparse during the rest of the first half of the 1930s. President Franklin D. Roosevelt asked for large cuts in the fiscal year 1934 military budget, and suggested the furlough of 3,000 to 4,000 officers and a reduction in flight pay (Underwood 1991:29). The President also supported placing limits on offensive weapons, including bombers—limits that the War Plans Division of the General Staff opposed (Underwood 1991:32-33, 73). “Budget cuts and President Roosevelt’s determination to reduce offensive weapons put the Air Corps in a precarious position, . . . [especially since it] lack[ed] a specific purpose for existing, . . . [making it] susceptible to additional budget cuts” (Underwood 1991:35). General Foulois, then Chief of the Air Corps (Waters 1983:359), thus began to promote the Air Corps as a vital element in coastal defense, which he felt would establish a clearer mission for the air arm. As part of the promotional effort, the directive *Employment of Army Aviation in Coast Defense* was published. The directive set out three primary responsibilities for the Air Corps—they were to seek and destroy enemy vessels on their way to U.S. coastlines, assist in the defense of the coast when enemy vessels approached close enough for action by ground forces, and provide support of ground forces in the event an enemy made a successful landing (Underwood 1991:35).

The Air Corps was assigned an unexpected mission on 9 February 1934, when orders were handed down to begin flying the mail. Commercial air carriers had been delivering mail, but President Roosevelt decided to cancel government contracts because of collusion and fraudulent practices. During the next 10 days the Air Corps organized personnel and equipment, and familiarized pilots with mail routes. A number of serious accidents during this period cast doubt on the Air Corps’ ability to perform its new duty, but pilots and the leadership were determined. Airmail deliveries began on 19 February, when the Air Corps began flying 40,800 miles a day (less than a third of what the commercial carriers had been flying) along 18 of what the Post Office considered the most essential routes. Deliveries were suspended on 11 March due to a string of fatal accidents. The Corps spent about a week reorganizing, eliminating some routes and flights, and giving pilots further training, then resumed deliveries on 19 March.

The Air Corps’ involvement in carrying the mail was terminated on 1 June 1934. In light of the numerous accidents and deaths during the brief period the Air Corps carried the mail, its performance could be considered extremely disappointing. General Foulois felt, however, that its performance was immensely important to the development of the Air Corps since it encouraged greater funding for air services (Maurer 1987:299-301, 317; Underwood 1991:39). “Had it not been for those deaths, the nation would have been as unprepared for the Second World War as it was for the first” (Maurer 1987:317). As early as 10 March,

¹⁰ This left one airship unit still active—the 19th Airship Company, stationed at Langley Field, Virginia. That company used both dirigibles and balloons for some time thereafter in support of coastal artillery units at Fort Monroe, Virginia, and in support of Langley Field’s Second Bombardment Group. The group headquarters for the Airship Company and the Airship School were still located at Scott Field (Maurer 1987:217).

Roosevelt had asked Congress for additional Air Corps appropriations to buy planes and improve stations (Underwood 1991:42).

The poor condition of the Air Corps also prompted the House Military Affairs Committee to investigate purchases to find out where tax dollars, sorely needed in all government departments, had gone. They discovered that Foullois had been buying planes under negotiated contracts rather than awarding purchases to the lowest bidder, the usual government agency practice. And in 1933, Foullois had negotiated a contract without even going through the competitive bidding process. He was forced to annul that contract and write a new proposal allowing competitive bidding. The Rogers Subcommittee, created by the Military Affairs Committee to investigate the Air Corps, accused Foullois of "dishonesty, gross misconduct, inefficiency, inaccuracy, unreliability, incompetency, and mismanagement" (Underwood 1991:48). Although the accusations were exaggerated, the Rogers Subcommittee eventually convinced him to relinquish his position as Chief of Air Corps. He retired at the end of 1935 (Underwood 1991:48-49).

THE ARMY HOUSING PROGRAM AND 1930s CONSTRUCTION AT POST FIELD

A concerted effort to provide better housing for U.S. Army troops was initiated by the Army Housing Program of 1926, a 10-year plan entailing the expenditure of \$148 million for new construction beginning in fiscal year 1927 (Risch 1962:713). Initial funding would be devoted to providing hospitals, barracks, and quarters "for the officers and men of the Army who had been, ever since the World War, compelled to exist under most disheartening conditions in temporary buildings and tent camps" (Wheaton 1928:10).

During the 1920s, the Army developed a new approach to facility construction and layout, influenced by the then new concept of city planning (Ford 1929:9). According to Lieutenant H.B. Nurse (1928:14), who served in the Design Branch, Engineering Division, Construction Service,

[t]he planning of a modern Army post, as the term is applied in our military establishment, is likened to that of modern city planning, in that the main object in view is an attempt to exert a well-considered control over the development of the physical environment as a whole. It must be stimulated by the conception of the post as one great social organism. The planning and developing must take such form as will secure healthful conditions, promote the scientific training of troops, and also furnish the means of social intercourse.

The new perception of "how utterly formless most of our Army or civilian layouts have been" (Ford 1929:19) was attributed in part by at least one writer to the new point of view provided by aviation.

Our new first view—our first and often lasting impression—of a city or of an Army post or field is from the air. If the town or the post "patterns" well; if it "mosaics" well; if the buildings are so grouped or so arranged that they present real attractiveness of form, then we get a distinct pleasure out of the animated map spread below us. The interesting part of it is that if a layout does mosaic well—to use a common architectural term—it probably means that the plan is worked out logically and practically.

It also means that thought has been given in the planning to something besides efficiency. Sheer beauty of layout can often be secured at no additional cost. The difference between a beautiful building or arrangement of buildings and an ordinary building is not a matter of adding gew-gaws or planting geraniums, but it is usually a matter of simplification and taste in design. Often this means lesser, not greater cost [Ford 1929:19-20].

It was also felt that a program of national scope, like the 1926 housing program, should present a unified appearance. Two architectural styles were felt to have "acquired some degree of national character" and be "familiar to and . . . understood by a majority of the people" (Wheaton 1928:11), qualities appropriate for

such a nationwide endeavor. These were the Colonial, or Georgian, architectural style, prevalent along the Atlantic Seaboard, and the Spanish Mission style of the southwest (Wheaton 1928:11). The Army decided to use both styles in the areas where they were most suited—the Spanish Mission (termed Mission/Spanish Colonial Revival in this report) style would be used at facilities in the south-central and western states, from Texas to California. With some exceptions, Colonial architecture would be used in other states, where many of the projects funded during the initial year of the program were located (Wheaton 1928:12). In July 1931, the Planning Branch of the Construction Division of the Office of the Quartermaster General was created, and two architects and two landscape architects were hired to bring “scientific planning and landscaping in the development of Army Posts and Air Fields” (Hallauer 1939:28). The “fundamental principles” of planning were also further defined as

(1) Unity—an ordered relation or organization existing among the parts of a design. Without it, there can be no design; (2) Practicality—as the word implies, demands that the design or layout be a practical or usable one; and (3) Interesting Simplicity—the essence of good design. Though plainly and simply executed, the design should still retain interest throughout. Ornamentation, a closely related consideration, is the “dressing up” or beautification of the Post or Field, itself. With it, we have the final polish, but still serving its practical role in the whole scheme [Hallauer 1939:28].

The Air Corps’ five-year plan, discussed in the preceding section, paralleled that of the Army as a whole in that it also aimed to provide better housing for Air Corps personnel (Maurer 1987:199-200). Initial allocations for this program were appropriated for fiscal year 1928 and reportedly included \$155,000 for new construction at Post Field (*The Guidon* 1928b:n.p.). During the first years of the program, the Air Corps wished to improve housing and hospitalization facilities for troops using dilapidated World War I-era buildings (Wheaton 1928:10), which included the one-story, tar-paper covered shacks built at Post Field during mobilization for World War I (*Field Artillery Journal* 1933:540); however, no new construction seems to have taken place at Post Field, and little new construction occurred at Fort Sill as a whole during the years 1929 through 1931 (Directorate of Public Works 1995a:various). In the fall of 1929, it was reported that 1,362 enlisted men were being housed in temporary quarters at Fort Sill, including those in the 88th Observation Squadron and the First Balloon Company, stationed at Post Field (Parker 1934:5). Fires had destroyed a number of quarters and other buildings by 1931, threatening the safety of the troops and further increasing the need for more housing (Brereton et al. 1929:1; *The Daily Oklahoman* [DO] 1992:n.p.; *Fort Sill Fire Bugs* 1926:1; Plank et al. 1930:1; Sunderland 1942:115).

Although no specific reason for a lack of funding or for a lack of action concerning new construction at Fort Sill has been found¹¹, the lack of such projects can probably be attributed to the lengthy effort of the War Department to select a permanent location for the Field Artillery School. Fort Sill was finally selected as the permanent location on 13 December 1930 (Anonymous 1943:n.p.), and on 22 December the same year a plan for new construction at Fort Sill was forwarded to the Adjutant General. The plan was approved the following February (Parker 1934:7). Under this plan, housing would be provided for officers and noncommissioned officers close to the activity area to which they belonged. The first priority was determined to be the construction of new quarters at Fort Sill to house the school troops then living in temporary buildings at Post Field. The Post Field buildings were

in such condition that it is deemed inadvisable to prolong their use beyond the earliest time when new buildings can be had to house this personnel. The aviation field buildings are most unsightly and the foundations are practically rotted away, also the roofs are gone to a point where it will be necessary to

¹¹ Between 1927 and February 1931, approximately \$30.25 million were spent to provide housing for troops in the continental U.S. Another \$16 million in contracts were then underway, and bids were being taken on more that \$3 million worth of additional work (QR 1931:11-12).

replace a large percentage of them within the next year and a half, unless they can be vacated [War Department 1930:3].

Funding for new buildings at Post Field followed soon thereafter, on 23 February 1931, appropriated under the First Deficiency Bill (Air Corps Technical). The first project authorized for construction was a hangar with annexes (Building 4908), followed by two field officers quarters (buildings 5078 and 5079), seven company officers quarters (buildings 5075 through 5077 and 5080 through 5083), and 10 noncommissioned officers quarters (buildings 5062 through 5071) later the same year (OCQM ca. 1932:1; *The Quartermaster Review* [QR] 1932:61-62). A barracks and additional housing were funded under the Emergency Relief and Construction Act. All these buildings were scheduled for completion by late 1932, but in the spring President Herbert Hoover impounded all "unobligated government construction funds" (Parker 1934:10), which at Post Field meant resources were not available to connect utilities to some of these buildings. Although basically finished, the buildings remained vacant for several months until funds were available to connect them to water, gas, electrical, and sewer systems. Until the end of 1932, it was thought that funding would continue to be awarded in small yearly increments. But Franklin D. Roosevelt's election in 1932 and the passage of the National Industrial Recovery Act in 1933, under which the Public Works Administration (PWA) was set up to promote construction, "changed the complexion of things" (Parker 1934:11). The Chief of Field Artillery applied to the PWA for funds to complete not only buildings then under construction, but for sufficient money to complete the entire new construction project at Fort Sill as it was then conceived. In September 1933, over \$4 million were allotted to the fort (Grenville 1994:176; Parker 1934:10-11; OCQM ca. 1933a:1; QR 1933:63; Sunderland 1942:121). This amount probably did not include funds for construction at Post Field, but it illustrates the greater availability of appropriations at that time, which was likely true for Post Field construction as well.

Although standard architectural drawings were sent from the Office of the Quartermaster General for housing and general purpose buildings (such as the barracks and officers' quarters), standardized plans did not exist at that office for buildings of utility only to aviation facilities. A description of the design process for such Air Corps buildings was published in *The Quartermaster Review* in 1940 (Thomas 1940:29). The Air Corps would furnish size and storage capacity requirements for needed buildings (such as hangars, shops, warehouses, runways, and aprons) to the Construction Division, Office of the Quartermaster General. In the Design Section, New Construction Branch of that office, architects would sketch proposed designs based on the requirements they received; forward these for approval to the Air Corps facility requesting construction; develop plans and specifications; and send the drawings to the Constructing Quartermaster, who would coordinate construction at the facility (Thomas 1940:29).

Most of the remaining interwar construction at Post Field was funded in 1934 and completed during that year and the next. A gasoline fueling system was installed (OCQM ca. 1934a:2, 5), two additional quarters built (OCQM ca. 1934b:63-64, 71), and several miscellaneous buildings—including the prominent balloon hangar (Building 5037)—were constructed during this time¹² (OCQM ca. 1934c:2, ca. 1934d:2, 7-8, ca. 1934e:2-3, 5, ca. 1934f:2-3, 8-9). The PWA provided funding for paving aprons at the field (Maurer 1987:349-350), although World War II would be over before Post Field got its first paved landing strip (Directorate of Public Works 1995a:various).

TECHNOLOGICAL AND ORGANIZATIONAL DEVELOPMENTS OF THE 1930s

In another step toward the creation of an independent air force, General Headquarters (GHQ) Air Force was created as a division of the Regular Army on 1 March 1935 (Maurer 1987:342-343), as an independent

¹² These buildings are all discussed in the section of this report concerning the contributing elements of the proposed Post Field Historic District.

operations and special missions aeronautical division of the Air Corps (Maurer 1987:374), the result of an effort by the Army General Staff to place all Air Corps' planes and other equipment under a single, but not a separate, command (Maurer 1987:342-343). Called a "revolutionary change in the organization of U.S. Army aviation" (Maurer 1987:342), the formation of GHQ Air Force reversed a destructive peace-time trend in the Army air services. Prior to the formation of GHQ Air Force, combat units, the core of war-time air operation, had been gradually dispersed. The formation of GHQ Air Force brought peace-time organization in line with that during mobilization and war (Maurer 1987:342-343), providing "a solid framework for building a powerful combat force" (Maurer 1987:345). Under GHQ Air Force, all combat aviation was brought under a single command "to support ground operations or act as a separate arm as the commander in chief in the field might deem necessary" (Maurer 1987:442). With the formation of the GHQ Air Force there were four elements in the Army air arm—"the Air Corps, which supplied men and materiel; observation units assigned to corps areas for direct support of ground forces; aviation units comprising the air forces of three overseas departments (Philippine, Hawaiian, and Panama Canal); and combat units in the United States making up GHQ Air Force" (Maurer 1987:442).

In 1936 the Field Artillery School at Fort Sill was reorganized into a School Troops Division (which included Flight E of the 16th Observation Squadron and the First Balloon Company, both stationed at Post Field), a Staff Troops Division, and an Academic Division. The departments at the school were Animal Transport, Gunnery, Materiel, Tactics and Communication, and the Extension Course (Nye 1936:9-10), with the Air Corps mainly working in the Department of Tactics and Communication, where "[i]nstruction is given in the tactics and technique of the associated arms, signal communication, general tactics, artillery intelligence, logistics, combat orders, reconnaissance, staff duties, artillery tactics, organization, and fire direction" (Nye 1936:11). Each officer enrolled in the standard course was given the opportunity to make two flights, one to orient and familiarize the officer with radio adjustment, the other to act as an artillery observer. Balloon flights were given for orientation only (Sunderland 1942:157).

The balloons in use at Post Field in 1936 were all still hydrogen-filled units, but a tragedy that year prompted a change to helium. There was some animosity between the lighter- and heavier-than-air units stationed at Post Field at that time, and in an effort to reduce friction, Captain F.D. Lynch of the 16th Observation Squadron offered to take a ride in a free balloon—not something he was particularly excited about. When the balloon in which he was a passenger touched down after a flight of about four hours, the hydrogen-filled envelope exploded as the gas was released, killing two of the four passengers. In early 1937, nonflammable helium replaced hydrogen as the gas used to fill all balloon envelopes at the field (Christy 1974:87-91).

The First Balloon Company received the Army's first Model C-6 motorized blimp in 1937 (Christy 1974:91), delivered to Post Field for testing and to give the three balloon pilots then stationed there a chance to pilot the new model. Post Field was chosen as the test site because of the "unusual" winds at the facility—"if it can be flown here, it can any place" (*The Field Artillery Journal* 1937:446). The two-person C-6 was similar to the C-3 "sausage" balloon, a style in use since World War I, except that it could be flown into position rather than having to be carried by truck, a slow and difficult process since it was usually necessary to inflate the balloon before moving it into position. Once in place, the C-6, like the earlier model, would be held in place by a tether attached to a winch truck (Christy 1974:91; *The Field Artillery Journal* 1937:446-447; Fort Sill Museum Archives 1937:1, 3).

GHQ Air Force felt airships were of little use, so all Army airships were transferred to the Navy in 1937, and associated personnel reassigned to other duties. This left the Air Corps' lighter-than-air branch composed of only the Headquarters 21st Balloon (formerly Airship) Group and a balloon depot at Scott Field; the First Balloon Squadron at Post Field; the Second Balloon Squadron at Fort Bragg, North Carolina; and the recently formed Third Balloon Squadron (formed from the 19th Airship Squadron) at Fort Lewis, Washington (Maurer 1987:373). The Air Corps authorized \$5,000 for limited barrage balloon experiments in 1937, sending the single balloon it ordered to Post Field in March 1939. After tests by the First Balloon Squadron it was sent to Panama "to obtain data on deterioration in storage" (Maurer 1987:374).

During the early Depression years the number of planes operated by the Air Corps dropped, but their numbers began increasing in 1936. That year, the Air Corps had 1,276 machines; by the end of 1939 the number had nearly doubled, reaching 2,177 (Maurer 1987:352). Post Field, as discussed in the previous section, and many other Air Corps facilities benefited from public works programs and funding during the 1930s. Although the implementation of the Civilian Conservation Corps (CCC) hampered operations of Air Corps facilities—many of those entering the CCC lived at Army camps prior to field assignments, and the Army “inducted the men, put them through a period of physical conditioning, set up and ran camps, and supplied food, clothing, shelter, medical care, and recreation” (Maurer 1987:348)—public works money benefited air services as well. Such funding was used in the construction of Hamilton Field, San Rafael, California; in building replacements at Middletown, Pennsylvania; to make improvements at Felts Field, Spokane, Washington; to pave runways at Selfridge Field; to add office space at Scott Field; to repair a hangar at Fort Leavenworth; to make improvements to Schoen Field, Fort Benjamin Harrison, Indiana; to pave aprons at three fields (Marshall Field, Fort Riley, Kansas; Post Field; and Rockwell Field); to build quarters at Patterson and Rockwell fields; to install a drainage system at Randolph Field; and to build a garage at March Field (Maurer 1987:349-350).

Heavier and faster planes like the B-17 bombers that began coming into use in the 1930s required paved rather than grass landing strips, which had been standard (and even necessary for planes that used tail-skid braking) up to that time. Paving often began at the aprons that extended in front of hangars, then was expanded in 25-foot sections of concrete six to eight inches thick. The expense of concrete encouraged alternate methods of stabilizing landing fields—compacted cinders were used at Bellows Field, Hawaii; oiled earth was tried at Langley Field; oil-covered crushed rock was used at Luke Field, Hawaii; and a mixture of asphalt, rock, and sand was experimented with at Moffett Field, California (Maurer 1987:369-370).

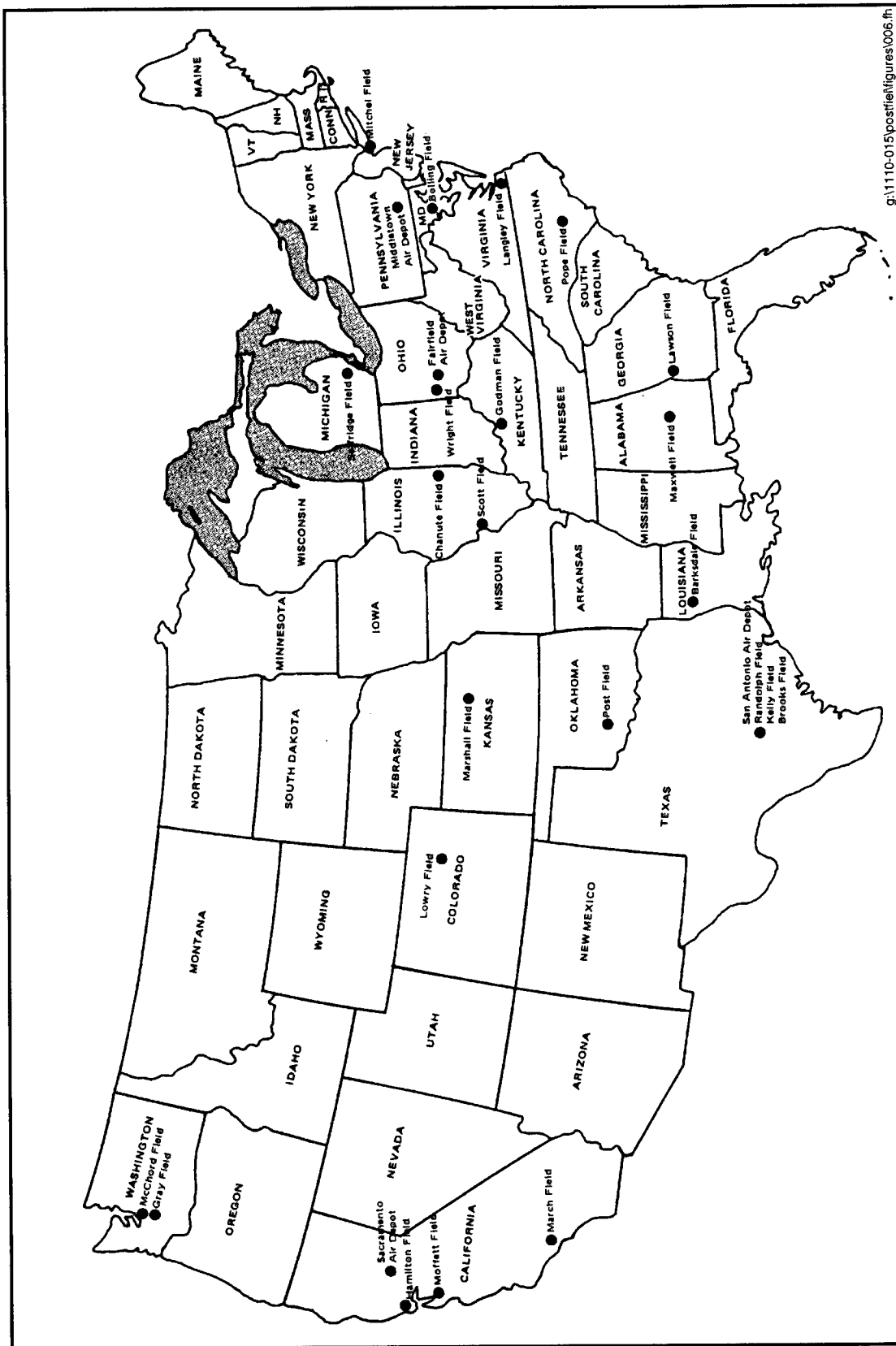
Beginning in the 1920s and continuing during the 1930s, the strength of observation capabilities fell while combat capabilities rose. In 1920, the Army's air arm included 14 observation and 13 combat squadrons. By 1939, there were only 10 observation squadrons, compared to 45 combat squadrons. Combat air units ceased to be assigned to ground units during this same period, leaving only observation units to offer support for ground forces (Maurer 1987:442).

THE ESCALATION OF HOSTILITIES AND WORLD WAR II

Increasing hostilities in Europe, the expansion of German and Italian propaganda and popularity in Central and South America, and, above all, the growth of the German air force the *Luftwaffe* during the latter 1930s all convinced President Roosevelt that the U.S. air forces needed to be expanded (Maurer 1987:435-436; Underwood 1991:103-104). Not only did equipment need to be acquired, but the distribution of installations was still

strikingly similar in its broad outlines to the hodgepodge of airfields hurriedly developed for training purposes during World War I. Although some new bases had been built and most of the older fields had benefited at one time or other by some improvements, the number of installations fell far short of the Air Corps' needs [Futrell 1983:121; Figure 6; cf. Figure 4].

In January 1939, the President asked Congress to appropriate \$300 million for the purchase of at least 3,000 more airplanes. “Congress responded by raising the Army's airplane authorization from 2,320 to 5,500, approving procurement of 3,251 planes, appropriating money to start the program, and raising the officer authorization to 3,203 and the enlisted to 45,000” (MacCloskey 1967:28-29; Maurer 1987:436). The expansion of the Air Corps between 1939 and 1941 “became a race to overtake the Axis air forces, which had been on a war footing for several years” (MacCloskey 1967:31).



g:\1110-015\postfieldfigures\006.tif

Figure 6. Primary Air Corps fields and depots in 1939 (from Maurer 1987).

The Air Corps decided temporary buildings would be used to house this huge increase in personnel, but technical buildings would be built as permanent buildings. Tents were set up at Kelly and Brooks fields; at Langley, March (Riverside, California), Scott, and other stations barracks, mess halls, and recreational buildings were constructed; facilities for technical training were expanded at Scott and Lowry (Denver, Colorado) fields; and utilities were updated at Bolling (Anacostia, D.C.) and Duncan (San Antonio, Texas) fields, and at Fairfield Depot, Ohio. Kelly Field also received a warehouse and March a radio building (Maurer 1987:437).

New construction was already underway at McChord Field, Washington, in 1939, and Congress furnished funds for the construction of "a number of other bases planned by the Air Corps for some time" (Maurer 1987:437). Five additional fields were also set up—Westover Field, Chicopee Falls, Massachusetts; MacDill Field, Tampa, Florida; Howard Field, at Bruja Point in the Panama Canal Zone; Borinquen Field, Puerto Rico; and Elmendorf Field, Anchorage, Alaska. During the summer of 1939, the expansion program was in full swing. Reservists were called to active duty, large numbers of flying cadets were recruited, additional civilian schools helped to train both pilots and mechanics, extensive aircraft and equipment orders were sent out, and the construction program was in high gear (Maurer 1987:437-438). In 1940, it was decided that all new construction would be temporary, and that only a minimum number of hangars and maintenance buildings would be built. Construction was carried out by the Quartermaster Corps during 1939 and most of 1940, but in November 1940, all Air Corps construction was transferred to the Corps of Engineers (Futrell 1983:131, 135).

A specific and well-defined purpose for the Air Corps was finally established for the first time in June 1940, when

the Air Corps listed its roles and missions in the Western Hemisphere in order of priority. They were to prevent the establishment of hostile air bases in the Americas; to defeat hostile air forces lodged in the hemisphere by attacking their bases; to defeat hostile air forces by aerial combat; to prevent the landing of expeditionary forces by attacking transports and supply ships; to cooperate with the mobile army in ground operations; and to operate in support of or in lieu of U.S. Navy forces against hostile fleets. This concept of air power employment exerted a tremendous influence over Air Corps planning during 1939-41 period [MacCloskey 1967:29-30].

Initially, the Air Corps planned to have 24 combat groups ready by the end of 1941, but Hitler's invasion of Poland "rendered that objective obsolete long before it could be achieved" (Maurer 1987:438). Between the fall of France in May 1940 and the U.S. entrance into the war, the combat-group goal was raised three times—to 41 in May 1940; to 54 two months later; then to 84 in the fall of 1941, the last increase spurred by the fall of Poland, the "airborne invasions of Norway, Denmark, Holland, and Belgium, the British defeat at Dunkirk, and the collapse of France" (Futrell 1983:131, 135; MacCloskey 1967:31-32). By the day Pearl Harbor was bombed, 70 tactical groups had been activated (14 heavy, nine medium, and five light bombardment groups; and 25 pursuit, 11 observation, and six transport groups), but most were ill equipped for entering a war (MacCloskey 1967:31-32; Maurer 1987:448).

In 1939, Air Corps observation units assigned to Army ground units to aid in reconnaissance, liaison, and fire control were stationed at Lawson Field, Fort Benning, Georgia; Pope Field, Fort Bragg, North Carolina; Godman Field, Fort Knox, Kentucky; Gray Field, Fort Lewis, Washington; Marshall Field; and Post Field.

These units varied in size from a flight to a squadron, and the fields were usually small and limited in facilities. Godman, for example, had originally been the Fort Knox polo grounds, and the observation squadron stationed there operated from a grass strip. In October 1937 the housing at these fields had been described as ranging from 'fair to bad.' Other small Army fields were Sherman at Fort Leavenworth, Kansas; Stewart at West Point, New York; and Phillips at the Aberdeen, Maryland, ordnance proving ground. None of these fields was controlled by the Air Corps [Futrell 1983:125].

Plans for mobilization construction at Post Field were not formally put forward until late 1940, when a proposal to build new quarters was submitted (Peek 1940:2). In 1941 and 1942, several barracks, classrooms, offices, and storage buildings were completed, all mobilization buildings of temporary construction. The development of plans for these buildings in general followed that outlined in the previous section except that "[f]or this Program, time did not permit the preparation of detailed plans in every instance. When these cases were brought to the attention of the using service, 'typical' plans, which were on hand and which had been used in some previous construction program, were approved by them. This was done in order to start the work at the earliest possible time, even though these plans might have been improved upon in many ways had time permitted" (Thomas 1940:62).

There were two experiments in aerial photography at Fort Sill during 1940. The first involved rapid in-flight development of photos of bomb bursts for use with fire control. Neither the British nor the Germans had worked much with this as a method of fire control, perhaps because Japanese experiments had determined it was of limited utility. The Fort Sill tests likewise showed that it was faster and simpler to have an observer plot impact centers and concentrations on photos previously developed and printed (Sunderland 1942:194-195). The second series of tests involved using wide-angle photographs as charts for plotting artillery fire. They were conducted in May and June, and involved work at the battery, regiment, battalion, and brigade levels (Sunderland 1942:195).

The same year, \$50,000 was allotted for research into the use of balloons for defense, an aspect of strategy that experienced a brief resurgence during the first years of World War II. A training center was established in 1941 at Camp Davis, North Carolina (later moved to Camp Tyson, Tennessee), and 10 balloon battalions had been formed by May 1942, six of which were distributed along the west coast, the remainder in the Canal Zone, Sault Saint Marie (Canada), and Hawaii. The use of these defense balloons, called barrage balloons, was problematic. Although they could provide protection for some strategic areas, opponents of their use argued that "they menaced property and friendly pilots, and that they actually advertised the location of the targets they were supposed to defend" (Goss and Bliss 1983:112). The balloon battalions were deactivated in August 1943. The last balloons were used for observation at approximately the same time. "In 1942, Fort Sill's balloon company was broken up. The Army's part in ballooning was over" (Wilson 1985:n.p.).

Army Aviation¹³ was said to have had a "humble beginning" at Fort Sill on 6 June 1942, "born of the battlefield necessity for improved artillery observation" (Vance 1957:7). One of the motivating forces behind the establishment of Army Aviation was a 1941 article by Major William W. Ford, which suggested commercial aircraft be made organic to ground force units and used to aid in the adjustment of artillery fire. Then Chief of Field Artillery Major General Robert M. Danford visited Fort Sill while artillery maneuvers were being conducted there in 1941; during his stay Major Ford pleaded the case for including the small Piper-, Aeronca-, and Taylorcraft-type planes, which were taking part in the maneuvers, as organic elements of Field Artillery units (Vance 1957:8).

This had been a long-standing desire of the Field Artillery, an issue finally to be addressed by the higher powers. Major General Danford wrote to the War Department that he felt "the time was ripe to provide organic air observation for the field artillery" (Sunderland 1942:235). An exchange followed which,

¹³ Army Aviation is "[a]viation conducted by Army personnel under command of Army unit commanders" (Heflin 1956:54). Army Aviation is considered "an organic part of the Army, although in certain procurement and training matters the AF [Air Force] acts for the Army. The mission of Army aviation is limited, and in combat operations it is largely restricted to observation, liaison work, courier missions, aerial wire-laying, artillery and topographic survey, and light transport within the combat zone including evacuation of the wounded" (Heflin 1956:54). Post Field is known as the first "home" of Army Aviation; the Army Aviation School was moved to Fort Rucker, Alabama, in 1954 (Vance 1957:20).

although not encouraging, brought the matter to the attention of the Assistant Secretary of War, John J. McCloy, to whom the proposal may have been growing more acceptable due to the successes of the light, slow aircraft used in the Army maneuvers Danford had observed. In the fall of 1941, McCloy contacted Fort Sill Commanding General George R. Allin to say that action would be taken on the matter.

That action came in the form of authorization by the Adjutant General to conduct "a test of organic air observation for the field artillery at Post Field, Fort Sill, early in 1942" (Sunderland 1942:235); William Ford, by then Lieutenant Colonel, was placed in charge of the experiment (Vance 1957:8). A test group was formed and 24 J-3 Piper Cub airplanes were borrowed from the Air Corps and sent to Fort Sill, along with pilots and mechanics. A six-week training and selection program began 15 January 1942 to prepare the pilots and mechanics for the test. The 20 pilots and 10 mechanics chosen to participate were split into two groups, one going to join the Second Division at Fort Sam Houston, Texas, the other to Fort Bragg, North Carolina, where they met with the 31st Artillery Brigade. The tests took place in March, and the two groups reassembled at Fort Sill in April (Sunderland 1942:235; Vance 1957:9).

Following the tests, on 6 June 1942,

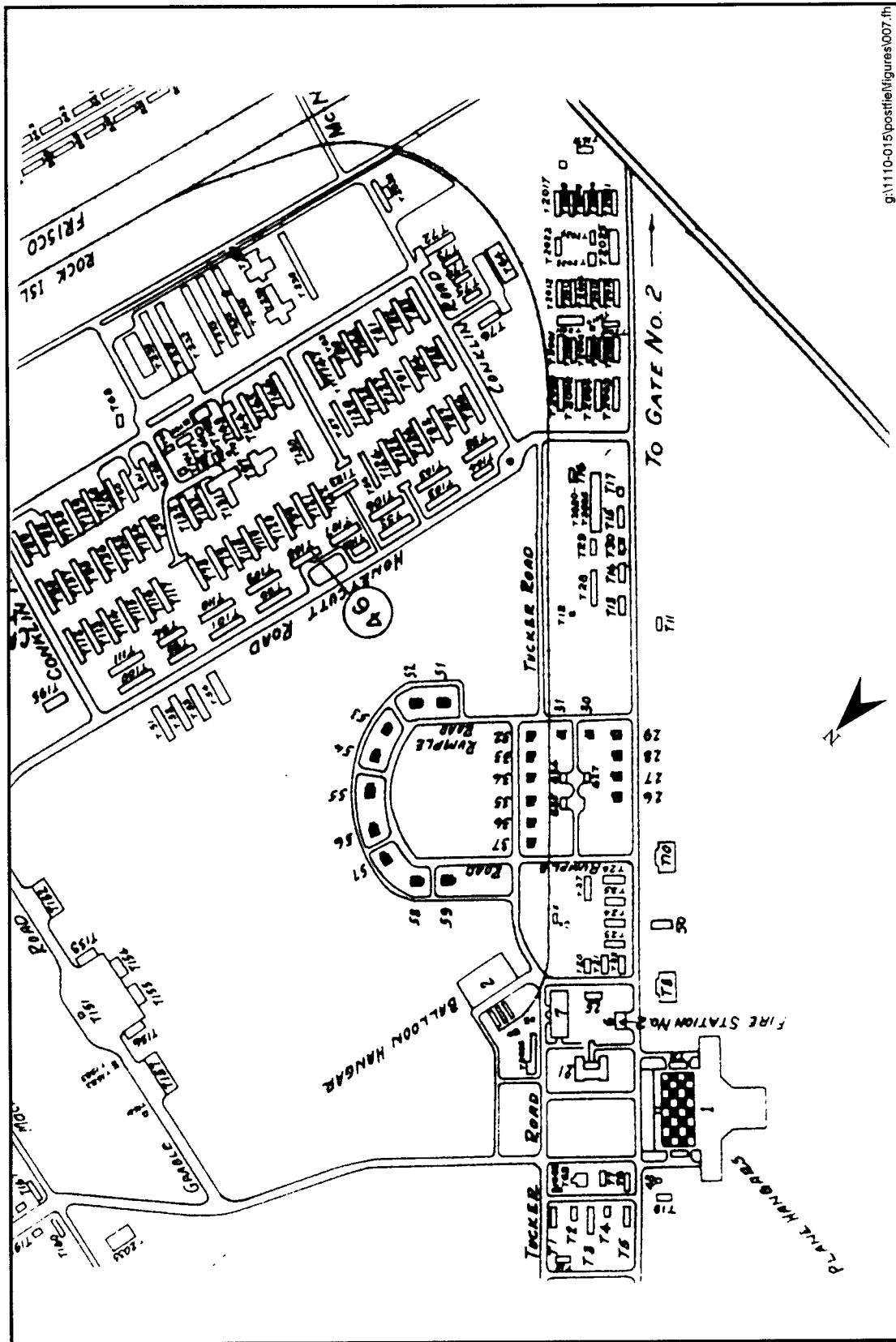
the War Department approved organic aviation for Field Artillery. Immediately thereafter the Department of Air Training of the Field Artillery School was established, with Col[onel] Ford as its director. The members of the test group for the Army Aviation provided the nucleus around which the Department of Air Training was built [Vance 1957:9].

The Air Corps then turned over Post Field to the Army, which established the Department of Air Training there. Temporary mobilization buildings, including mainly barracks and troop support buildings like a recreation hall and post exchanges, were built in connection with the school (Directorate of Public Works 1995a:various; Futrell 1983:131, 135, 149). The layout of Post Field near the end of the war is shown in Figure 7. What was originally a five-week course was soon expanded, and special primary flight schools for prospective Field Artillery pilots were set up at Pittsburg, Kansas, and Denton, Texas. After attending one of these primary schools, pilots went to Post Field for their advanced training, which included "short field procedures and observer training" (Vance 1957:9). The first request for aviators to be sent to European theaters of operations came in September 1942. However, on their arrival in England these pilots and mechanics were sent into training as infantry replacements. Although this error was quickly rectified and the group assigned to the 13th Field Artillery Brigade, they then found themselves with instruction duties in the II Corps Air Observation Post School, not a task they were well prepared for since they had no airplanes, texts, or teaching materials (Vance 1957:9-10). Finally, on 8 November 1942, the Fifth Army became the first to employ light observation planes, the operators trained at the Observation Post School. They took off from the *U.S.S. Ranger* 60 miles off the coast of North Africa, but their first mission was a failure. One plane was shot down by the troops on the *U.S.S. Brooklyn*, who mistook it for an enemy plane, and the two others landed near a French fort, where they were taken prisoner for some hours (Vance 1957:11).

Eventually, though, small observation planes were successfully included in combat missions.

In early 1943, all major U.S. Army units in Tunisia had received some air sections. These sections were performing duties at considerable variance with the original intent. They were flying many missions not connected with artillery observation.

The uncertainties and unknowns of combat, coupled with a lack of opportunity to participate in unit training prior to combat, all contributed to an initial mediocrity of success in employing Air OPs [Observation Post troops]. Another deterring factor was the complete lack of supply and maintenance support. Although the Air Corps was charged with providing this support, the responsibility had been overlooked in their planning of overseas stock levels and maintenance support units. Improvisation was the key to success in North Africa. Much credit can be given to the engineering officers and air mechanics of the various Air OP sections who had to work doubly hard to keep the [Piper] Cubs flying [Vance 1957:12].



g:\1110-015\postfield\figures\007 fh

Figure 7. Post Field as it appeared in April 1945 (McCaw 1946).

Regardless of the disappointing record in the early years of Army Aviation operations, by 1944 there was "not a shadow of doubt that the Field Artillery now regarded its light planes as indispensable" (Vance 1957:13), and eventually "[e]very major type of combat unit, except anti-aircraft, found a use for them and borrowed them from the field artillery when it could meet some vital battle need, such as visual and photographic reconnaissance" (Vance 1957:14). Army Aviation was so successful during World War II that "in 1945 it was made organic to all combat branches of the Army" (Griswold n.d.:n.p.).

By the end of the war, the Army agreed that nine light planes would from then on be considered a part of each armored division; seven would be included in each cavalry division; six in each infantry, airborne, and mountain division; two in each cavalry squadron, tank battalion, tank destroyer battalion, cavalry group, and tank destroyer group; and one in each engineer battalion. This program was being implemented at the close of the war, 14 August 1945; the Army then had 1,600 light single-engine aircraft in the program (Vance 1957:18). On 7 December 1945, the Department of Air Training at Post Field became a school in its own right, called the Army Ground Forces Air Training School, later redesignated the Army Aviation School (Griswold n.d.:n.p.). Whereas the training offered by the Department of Air Training had been limited to field artillery personnel, the Air Training School expanded its student body to include troops in the Infantry, Armored (Tank), Cavalry, Tank Destroyer, and Engineer arms of the Army Ground Forces (McCaw 1946:3).

During World War II, all the Army Aviation aircraft were civilian models adapted to military use. The Army began acquiring both fixed-wing and the newly developed rotary-wing craft specially designed for military purposes after the end of the war (Vance 1957:18). The application of the helicopter to Korean War missions brought rotary-wing craft into a prominent position in Army Aviation and brought "the realization that Army Aviation possessed the capability of revolutionizing many of the techniques of tactical employment" (Vance 1957:20).

Army Aviation outgrew its place of birth at Post Field and was moved to Fort Rucker, Alabama, in September 1954 (Griswold n.d.:n.p.; Vance 1957:20). However, the field's association with Army Aviation has continued. Until recently, Army Aviation units stationed at Post Field included units which were assigned CH-47 Chinook helicopters, making Post Field a particularly important base for units of medium- and heavy-lift capabilities. These began being transferred to Fort Campbell, Kentucky, in September 1995, and the Fort Sill missions involving these units officially ended in September 1996. At this time, Fort Sill's association with Army Aviation is primarily in the areas of the Medical Evacuation (MEDIVAC) and Military Assistance to Safety and Transportation (MAST) missions of the 82nd Medical Company of Fort Riley, Kansas, which has been assigned to Fort Sill (Randy Palmer,¹⁴ personal communication 1996).

¹⁴ Mr. Palmer is the Airfield Manager at Post Field and has been associated with operations at the facility since the 1970s.

CHAPTER 4

THE CONTRIBUTING ELEMENTS OF THE POST FIELD HISTORIC DISTRICT AT FORT SILL

INTRODUCTION

There are currently 47 buildings still standing in the Post Field area (Table 2). Of these, 37 pre-World War II-era buildings of permanent construction and one of semi-permanent construction (a total of 38 buildings) are considered to be contributing elements to the proposed Post Field Historic District. Most of the contributing elements were constructed in a Mission/Spanish Colonial Revival architectural style, the exceptions (buildings 4908, 5032, 5033, 5037, 5041, 5042, and 5091) being primarily of a military, utilitarian, or industrial style (Table 3). Eight of the nine buildings in the proposed historic district that are not considered contributing elements are of temporary construction; one (Building 5074) is less than 50 years old (see Table 2).

The World War II temporary mobilization buildings were a part of Post Field during the period when the field served as the center for the education of pilots for observation and liaison work during World War II in the Department of Air Training, a division of the Field Artillery School. Although these buildings are related to significant events occurring during World War II and within the history of Army Aviation, the buildings fall under the Programmatic Memorandum of Agreement between the Department of Defense, the Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers, which states that temporary mobilization buildings may be demolished, with the stipulation that buildings requiring documentation will be documented prior to demolition. The Construction Engineering Research Laboratory has examined the temporary buildings at Post Field and determined that none of the buildings require documentation, and that any or all may be demolished (Austin and Peter 1996:VI-3). The eight buildings within the boundaries of the proposed Post Field Historic District are therefore not eligible for inclusion in the National Register of Historic Places and are not considered contributing elements to the Post Field Historic District.

In the following discussion of the contributing elements of the proposed Post Field Historic District, individual buildings are grouped according to the number of the Office of the Quartermaster General architectural plans used to construct them. Recent photographs and current floor plans of each type of building accompany the discussion.

Table 2
Standing Buildings in the Post Field Area

Building Number	Building Name	Year Completed	Type of Construction	Contributing Element
4908	Aircraft Maintenance Hangar	1932	Permanent	yes
5030	Administration Building	1933	Permanent	yes
5031	Fire Station	1934	Permanent	yes
5032	Clinic, without beds	1934	Permanent	yes
5033	Calibration Facility	1934	Permanent	yes
5037	Aircraft Maintenance Facility	1935	Semi-permanent	yes
5041	Inflammable Materials Storage	1934	Permanent	yes
5042	Heat Plant Building	pre-1942	Permanent	yes
5043	Exchange Branch	1942	Temporary	no
5044	Airfield Operations Building	1942	Temporary	no
5045	Exchange Branch	1942	Temporary	no
5046	Recreation Building	1942	Temporary	no
5047	Enlisted Barracks	1942	Temporary	no
5048	Enlisted Barracks	1942	Temporary	no
5049	Enlisted Barracks	1942	Temporary	no
5050	Exchange Branch	1942	Temporary	no
5051	Detached Garage	1934	Permanent	yes
5053	Detached Garage	1934	Permanent	yes
5054	Detached Garage	1934	Permanent	yes
5060	Family Housing, NCO and Enlisted	1934	Permanent	yes
5061	Family Housing, NCO and Enlisted	1934	Permanent	yes
5062	Family Housing, NCO and Enlisted	1933	Permanent	yes
5063	Family Housing, NCO and Enlisted	1933	Permanent	yes
5064	Family Housing, NCO and Enlisted	1933	Permanent	yes
5065	Family Housing, NCO and Enlisted	1933	Permanent	yes
5066	Family Housing, NCO and Enlisted	1933	Permanent	yes
5067	Family Housing, NCO and Enlisted	1933	Permanent	yes
5068	Family Housing, NCO and Enlisted	1933	Permanent	yes
5069	Family Housing, NCO and Enlisted	1933	Permanent	yes
5070	Family Housing, NCO and Enlisted	1933	Permanent	yes
5071	Family Housing, NCO and Enlisted	1933	Permanent	yes

Table 2 (cont'd)

Building Number	Building Name	Year Completed	Type of Construction	Contributing Element
5074	Detached Storage Building	1958	Permanent	no
5075	Family Housing, Lt. Colonel and Major	1933	Permanent	yes
5076	Family Housing, Lt. Colonel and Major	1933	Permanent	yes
5077	Family Housing, Lt. Colonel and Major	1933	Permanent	yes
5078	Family Housing, Colonel	1933	Permanent	yes
5079	Family Housing, NCO and Enlisted	1933	Permanent	yes
5080	Family Housing, NCO and Enlisted	1933	Permanent	yes
5081	Family Housing, Lt. Colonel and Major	1933	Permanent	yes
5082	Family Housing, Lt. Colonel and Major	1933	Permanent	yes
5083	Family Housing, Lt. Colonel and Major	1933	Permanent	yes
5087	Detached Garage	1934	Permanent	yes
5088	Detached Garage	1934	Permanent	yes
5089	Detached Garage	1934	Permanent	yes
5090	Detached Garage	1934	Permanent	yes
5091	Distribution Transformer Building	1933	Permanent	no
5092	Detached Garage	1934	Permanent	yes

Sources: Directorate of Public Works 1992:n.p., 1995a:various, 1995b:various; McCaw 1946:n.p.; *Real Property Record*¹⁵ various:various.

BUILDING DESCRIPTIONS AND CONSTRUCTION HISTORIES

BUILDING 4908, AIRCRAFT MAINTENANCE HANGAR; PLAN NUMBERS 695-253, 695-254, 695-259, 695-271 THROUGH 695-275, 695-277 THROUGH 695-280, 695-284, 695-285, 695-295, AND 695-297¹⁶

Originally designated as Building 1 and called the Double Plane Hangar, this building was constructed in 1932 in the Military/Utilitarian style at a cost of \$59,272 (*Real Property Record*). Under the First Deficiency Bill (Air Corps Technical), approved February 1931, \$40,000 was allotted for a hangar building and \$20,000 for an administrative building (OCQM ca. 1932:1). In designing Building 4908, both buildings and functions were combined to include "all heavier than air operations under one roof" (OCQM ca. 1932:1) and provide

¹⁵ The Real Property Record consists of a series of cards, each of which lists information about one building or structure at Fort Sill.

¹⁶ This list of plan numbers is given in the Completion Report (OCQM ca. 1932:1); the Real Property Report only lists Plan Number 695-284.

Table 3
Architectural Data for Contributing Elements to the Post Field Historic District

Building Number	Building Name	Year Completed	Architectural Plan Number*	Architectural Style
4908	Aircraft Maintenance Hangar	1932	695-284	Military/Utilitarian
5030	Administration Building	1933	621-861	Mission/Spanish Colonial Revival
5031	Fire Station	1934	634-185	Mission/Spanish Colonial Revival
5032	Clinic, without beds	1934	706-100	Neo-Georgian
5033	Calibration Facility	1934	634-235 through 634-240	Military/Utilitarian
5037	Aircraft Maintenance Facility	1935	6143-1115	Utilitarian/Industrial
5041	Inflammable Materials Storage	1934	702-102	Utilitarian
5042	Heat Plant Building	pre-1942	N/A	Utilitarian
5051	Detached Garage	1934	6143-1015A	Mission/Spanish Colonial Revival
5053	Detached Garage	1934	6143-1015A	Mission/Spanish Colonial Revival
5054	Detached Garage	1934	6143-1015A	Mission/Spanish Colonial Revival
5060	Family Housing, NCO and Enlisted	1934	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5061	Family Housing, NCO and Enlisted	1934	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5062	Family Housing, NCO and Enlisted	1933	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5063	Family Housing, NCO and Enlisted	1933	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5064	Family Housing, NCO and Enlisted	1933	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5065	Family Housing, NCO and Enlisted	1933	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5066	Family Housing, NCO and Enlisted	1933	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5067	Family Housing, NCO and Enlisted	1933	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5068	Family Housing, NCO and Enlisted	1933	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5069	Family Housing, NCO and Enlisted	1933	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5070	Family Housing, NCO and Enlisted	1933	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5071	Family Housing, NCO and Enlisted	1933	625-1551 through 625-1554	Mission/Spanish Colonial Revival
5075	Family Housing, Lt. Col. and Major	1933	625-1350	Mission/Spanish Colonial Revival

Table 3 (cont'd)

Building Number	Building Name	Year Completed	Architectural Plan Number*	Architectural Style
5076	Family Housing, Lt. Col. and Major	1933	625-1350	Mission/Spanish Colonial Revival
5077	Family Housing, Lt. Col. and Major	1933	625-1350	Mission/Spanish Colonial Revival
5078	Family Housing, Colonel	1933	625-1350 through 625-1356	Mission/Spanish Colonial Revival
5079	Family Housing, NCO and Enlisted	1933	625-1350 through 625-1356	Mission/Spanish Colonial Revival
5080	Family Housing, NCO and Enlisted	1933	625-1350	Mission/Spanish Colonial Revival
5081	Family Housing, Lt. Col. and Major	1933	625-1350	Mission/Spanish Colonial Revival
5082	Family Housing, Lt. Col. and Major	1933	625-1350	Mission/Spanish Colonial Revival
5083	Family Housing, Lt. Col. and Major	1933	625-1350	Mission/Spanish Colonial Revival
5087	Detached Garage	1934	6143-1015A	Mission/Spanish Colonial Revival
5088	Detached Garage	1934	6143-1015A	Mission/Spanish Colonial Revival
5089	Detached Garage	1934	6143-1015A	Mission/Spanish Colonial Revival
5090	Detached Garage	1934	6143-1015A	Mission/Spanish Colonial Revival
5091	Distribution Transformer Building	1933	N/A	Utilitarian
5092	Detached Garage	1934	6143-1015A	Mission/Spanish Colonial Revival

* The plan numbers listed here were taken from the appropriate Real Property Report. For a more complete list of the plans used, see the following textual description of each building type. Two buildings for which building numbers not given in the Real Property Reports are indicated by N/A.

Sources: Directorate of Public Works 1992:n.p., 1995a:various, 1995b:various; (Gulf Engineers & Consultants, Inc. [GECI], and Freeman 1993:various; McCaw 1946:n.p.; *Real Property Record*¹⁷ various:various.

"a fire proof hangar with shops, parachute room, photographic laboratory and offices, for Air Corps activities and accommodations for visiting planes and personnel" (OCQM ca. 1932:2). Harman Engineering Company, Chicago, Illinois, was awarded the construction contract (contract number not known), and the company began work at the end of 1931. Harman Engineering defaulted on the contract and apparently left the site in the second week of July 1932, before the building was completed. The Quartermaster complained about Harman Engineering's work, saying they "had practically no organization or equipment. . . . [P]ractically all of the work was done by sub-contractors who furnished the labor and equipment, with the exception of the steel work. The steel work was started by a sub-contractor who abandoned the job and his equipment on February 1, 1932" (OCQM ca. 1932:3). The Public Indemnity Company, Newark, New Jersey, took over the project after Harman Engineering left, completing it by the end of September 1932 (OCQM ca. 1932:3-4).

Upon completion, the building included a boiler house, connecting bay, and two annexes; it was also built with a plank roof, an option allowed under Office of the Quartermaster General Specifications Number 8792-D, which applied to the construction of the hangar. The building had a concrete foundation, structural steel

¹⁷ The Real Property Record consists of a series of cards, each of which lists information about one building or structure at Fort Sill.

skeleton, curtain tile walls with stucco finish, and enclosed 36,250 square feet of work and office space. The dimensions of the main building were 120 feet by 289 feet; one of the two annexes was 35 feet by 22 feet, the other was 20 feet by 40 feet. Glass sash was used extensively (OCQM ca. 1932:1; *Real Property Record*). It is worth noting that this building occupied the same space as an earlier hangar, probably one of the wooden hangars built in 1917, and the foundation of that hangar, below the grade needed for the 1932 hangar, was left in place, forming part of the fill for the new foundation (OCQM ca. 1932:3).

In 1933 the west bay of the hangar (measuring 111 feet by 120 feet) was fire-proofed by encasing the steel roof trusses in three and one-half inches of gypsum (OCQM ca. 1933b:2). A 96-foot-by-34-foot extension was added in 1966, the greatest change in the building since it was built. This addition had a reinforced concrete foundation, concrete masonry walls, and a built-up roof. Minor alterations since that time include the addition of several exhaust fans; the updating of the electrical wiring, fire control, and the lighting system; the installation of window air conditioning units; and the construction of a small 20-foot-by-20-foot extension, which had a concrete foundation, concrete block walls, and metal decking with a built-up roof. With all additions, the building now encloses 43,819 square feet of space (*Real Property Record*). The building as it currently exists is shown in Figure 8, and its current floor plan is shown in Figure 9.

BUILDING 5030, ADMINISTRATION BUILDING; PLAN NUMBERS 621-376, 621-378, 621-388, 621-389, 621-391 THROUGH 621-394, 621-861, 621-862, 621-864, 621-868, 621-869, 621-920, 621-926, 621-927, 621-929, AND 621-935 THROUGH 621-937¹⁸

This Mission/Spanish Colonial Revival building was originally designated Building 21, the Air Corps Barracks. The construction contract (Contract Number W6143 qm-8) was awarded to Holmboe Construction Company, Oklahoma City, Oklahoma, which also had been awarded the contract for the construction of the nine officers' residences discussed below (buildings 5075 through 5083). Excavation for the Air Corps Barracks began in December 1932, and the building was completed by November 1933 at a cost of \$99,990. It had four floors including the basement, and enclosed 38,207 square feet of building space. The foundation was concrete, and the walls were tile and stucco with eight-over-eight light windows; the gable roof of the U-shaped building was red ceramic tile. Installed upon completion were several appliances for the dining facilities, including a refrigerator, dishwasher, toaster, mixer, peeler, and ice maker. The barracks originally had a capacity of 188 (OCQM ca. 1933a:2-5; *Real Property Record*).

As with the construction of buildings 5075 through 5083, the Quartermaster General was unhappy with the performance of Holmboe Construction. In the Completion Report for this building (OCQM ca. 1933a:4) there are complaints that the company was disorganized, and had no equipment of its own, and that the quality of the work it oversaw was less than desirable. Most of the work was accomplished by subcontractors, and Holmboe Construction "used every conceivable subterfuge to avoid paying the prevailing rates of wages. The contractor sublet labor to irresponsible sub-contractors, groups of men, etc., in an endeavor to avoid proper payments" (OCQM ca. 1933c:4).

Most of the modifications to this building have impacted only the interior. In 1967 its capacity was reduced to 166 by turning some of the rooms into office space, but apparently there was little or no physical modification to the building at that time. More living areas were converted to administrative uses in 1972; accompanying this change, rest rooms were added, new wall partitions were set up, and doors and windows were altered to accommodate the additions. An air conditioning unit was installed at the same time, along with metal air ducts, and the lighting and electrical wiring were also updated (*Real Property Record*).

¹⁸ This list of plan numbers is given in the Completion Report for the barracks (OCQM ca. 1933c:2); the *Real Property Report* only lists Plan Number 621-861.

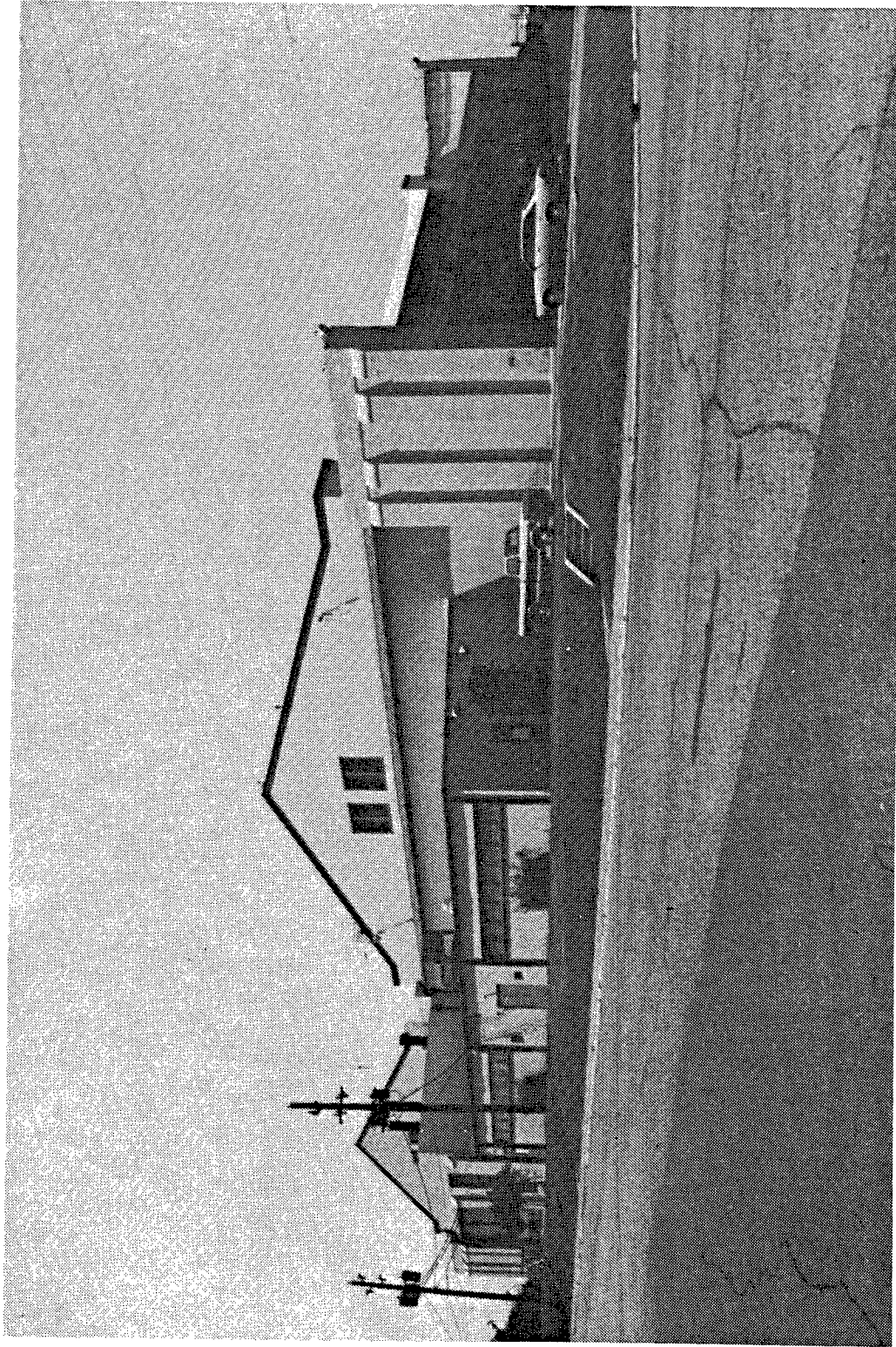
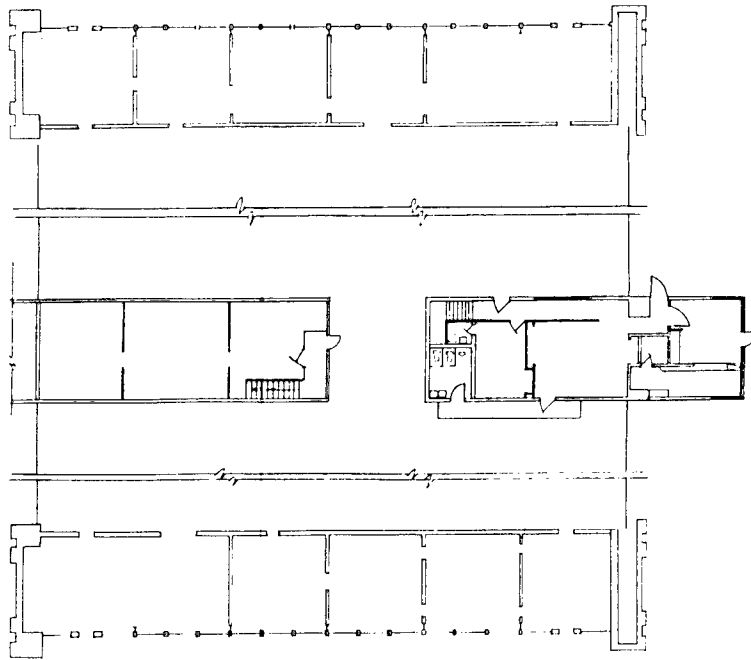
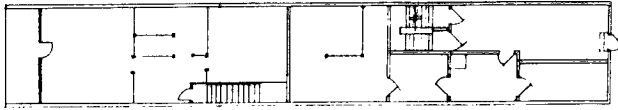


Figure 8. Building 4908, Aircraft Maintenance Hangar.



PARTIAL FIRST FLOOR PLAN BLDG. 4908



SECOND FLOOR PLAN

Revised By	Date	Description	By
Designed By		DIRECTOR OF FACILITIES ENGINEERING	
Drawn By		FORT SILL, OKLAHOMA	
Checked By			
Submitted By			
Approved			
DATE: 4/5			
FLOOR PLAN BLDG. 4908			
SCALE: 1/8" = 1'-0"			
APPROVED			

Figure 9. Building 4908, Aircraft Maintenance Hangar, first and second floor plans (drawings courtesy of Fort Sill).

Although the building exterior has changed little since it was completed, the setting has been altered slightly by the installation of exterior air conditioning condenser units on the southwest side of the building, surrounded however by a screen that blends well with the architectural style of the building. The barracks as it currently exists is shown in Figure 10, and its current floor plan is shown in Figure 11.

BUILDING 5031, FIRE STATION, PLAN NUMBERS 634-185 THROUGH 634-190

This Fire Station was originally called Fire Station Number 2, and originally designated Building 5. The Mission/Spanish Colonial Revival-style building was erected by the A.J. Rife Construction Company, Dallas, Texas, under Contract Number W6143 qm-36 (Rife Construction also erected buildings 5060 through 5071, as discussed below). The original bid of \$22,275 was increased by two change orders to \$22,745; the total cost to the government was \$27,500 (OCQM ca. 1934g:2). Completed in August 1934, the building enclosed 5,575 square feet of living and storage space within its 70-foot-by-45-foot dimensions; had a concrete foundation as well as concrete floors for the second story and attic; had 12-inch brick load-bearing walls with stuccoed exteriors; and had a ceramic tile roof with a flat built-up roof over the one-story portions of the building on the north and south sides. The original metal casement windows had fixed upper lights; the original pedestrian and garage doors also had lights (Directorate of Public Works 1995a:111; Vogeles 1993:n.p.). Fire Station Number 2 was built to "accommodate one ambulance, one crash truck, two fire trucks" (OCQM ca. 1934g:2), and to provide living quarters for 10 fire fighters (OCQM ca. 1934g:2; Vogeles 1993:n.p.).

The Fire Station has been modified, most notably by the addition of another garage to the north side—of the Spanish Mission style, but slightly larger and lacking the arched doorway all the other garage openings have—and by the infill of the southernmost garage opening. Most of the original casement windows have been replaced with single hung aluminum units, and all of the original garage doors have been replaced with metal overhead units. On the interior, a suspended ceiling has been installed in the kitchen, and the kitchen and bathroom have been remodeled (Real Property Record; Vogeles 1993:n.p.). The building as it currently exists is shown in Figure 12, and its current floor plan is shown in Figure 13.

BUILDING 5032, CLINIC WITHOUT BEDS, PLAN NUMBER 706-100

Now identified as the Harrison Family Practice Clinic, this medical facility was originally called the Post Field Dispensary and designated Building 25. It was constructed in 1934 by the Busboom Brothers, Fairbury, Nebraska, under Contract Number W6143 qm-38. The original contract was for \$22,000, later decreased to \$21,698. The total cost to the government was \$27,500 (OCQM ca. 1934c:2). The clinic was built with three floors—a basement (containing storage space and the heating plant), first floor, and attic.

The building's outside dimensions were 60 feet by 40.5 feet, enclosing 2,909 square feet (Directorate of Public Works 1995a:111; OCQM ca. 1934c:2). The foundation was of concrete; the exterior walls and partitions were hollow clay tile, with plaster finish on the interior and stucco on the exterior. The hip roof was covered with flat ceramic tile and had dormer-style louvered vents (Real Property Report). The interior had both asphalt and ceramic tile floors over a terrazzo base (OCQM ca. 1934c:2).

Modifications to Building 5032 have been minimal. A central air conditioning system was installed in 1959, and a wire mesh security screen was placed over one window in 1978 (Real Property Report). The six-over-six windows currently in use are probably original, as is the six-light-over-two-panel door with full transom light. The building as it currently exists is shown in Figure 14, and its current floor plan is shown in Figure 15.

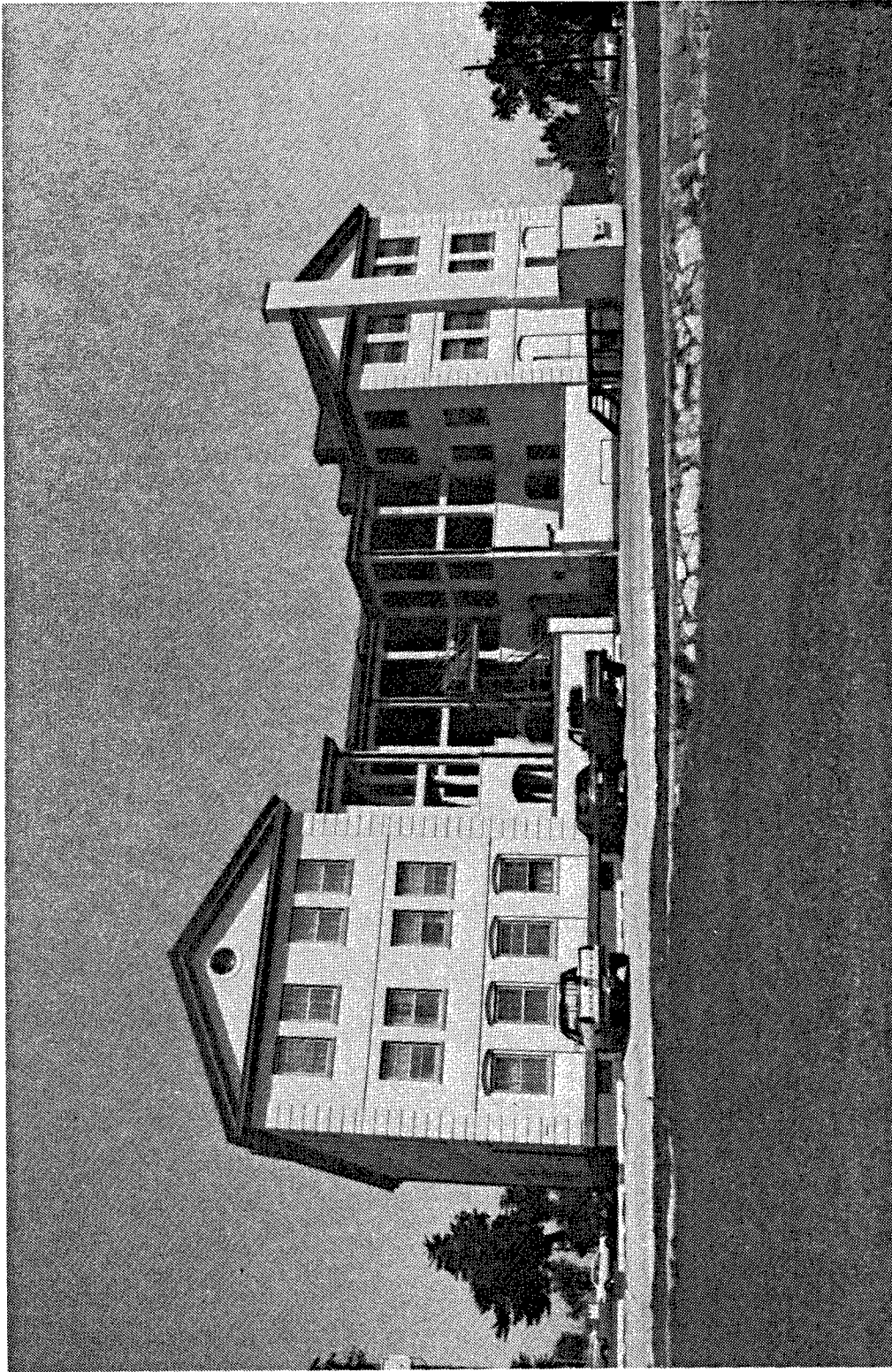


Figure 10. Building 5030, Administration Building.

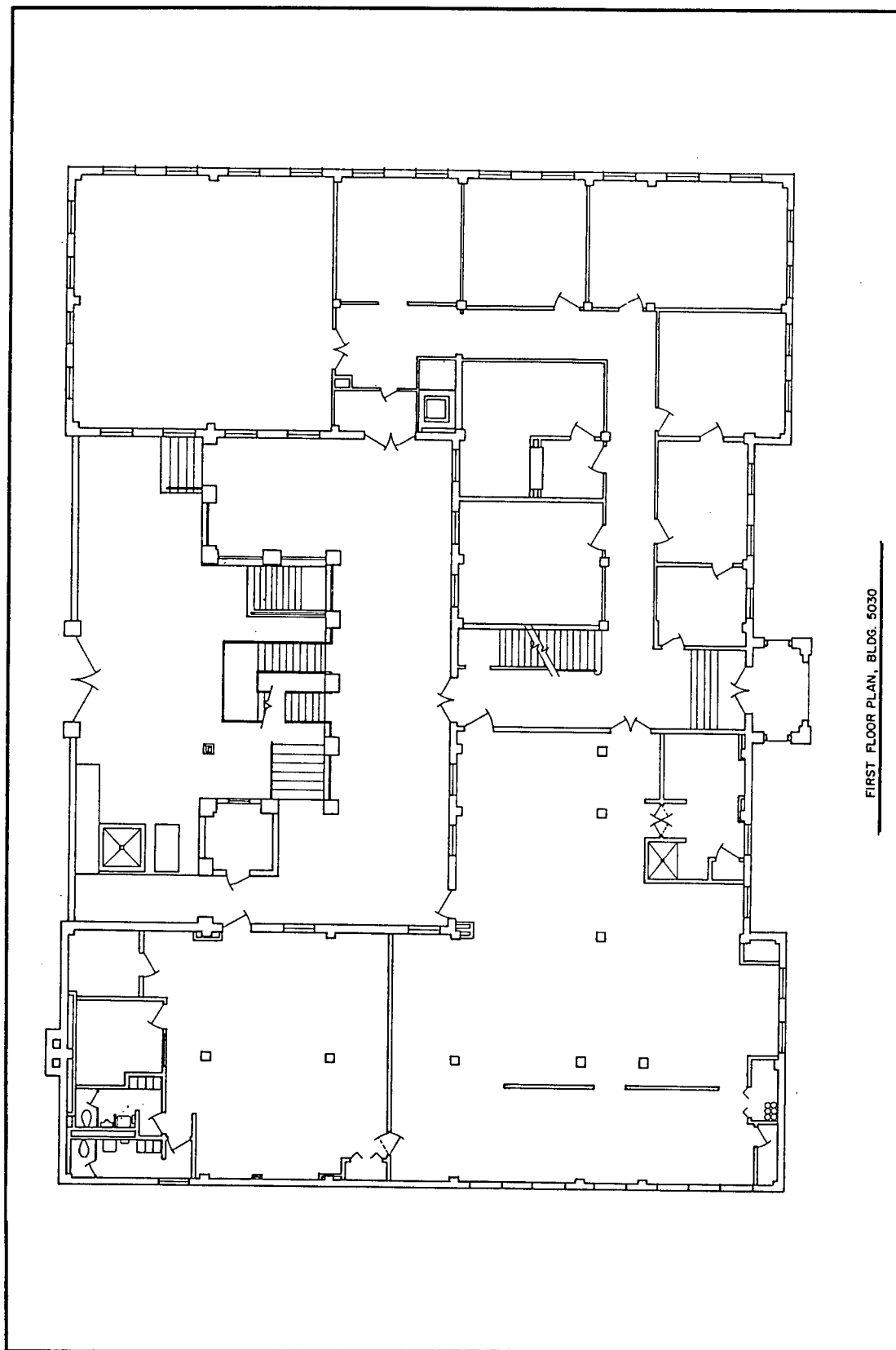


Figure 11. Building 5030, Administration Building, first floor plan (drawing courtesy of Fort Sill).



Figure 12. Building 5031, Fire Station (photo courtesy of Fort Sill).

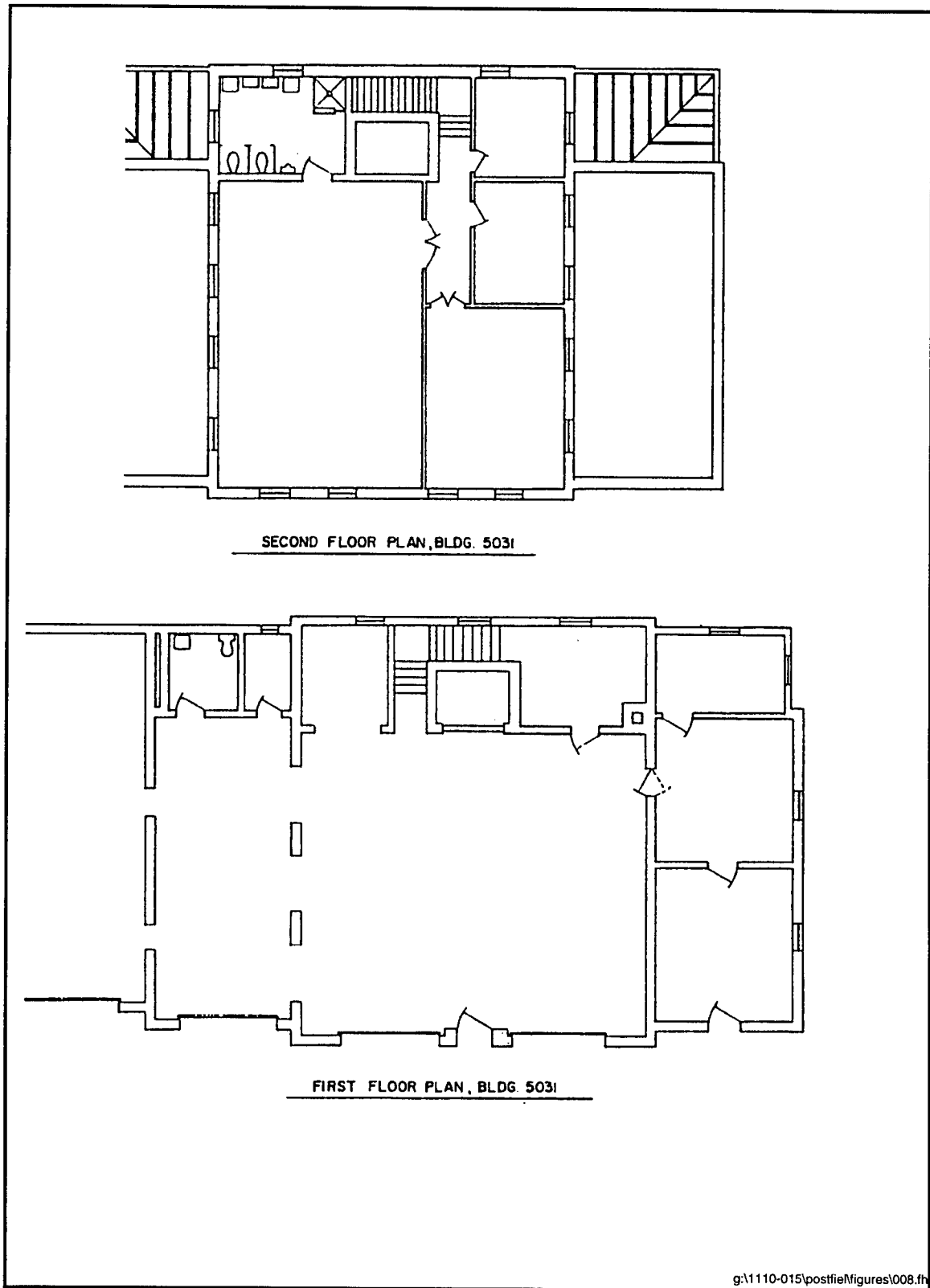


Figure 13. Building 5031, Fire Station, first and second floor plans (drawings courtesy of Fort Sill).

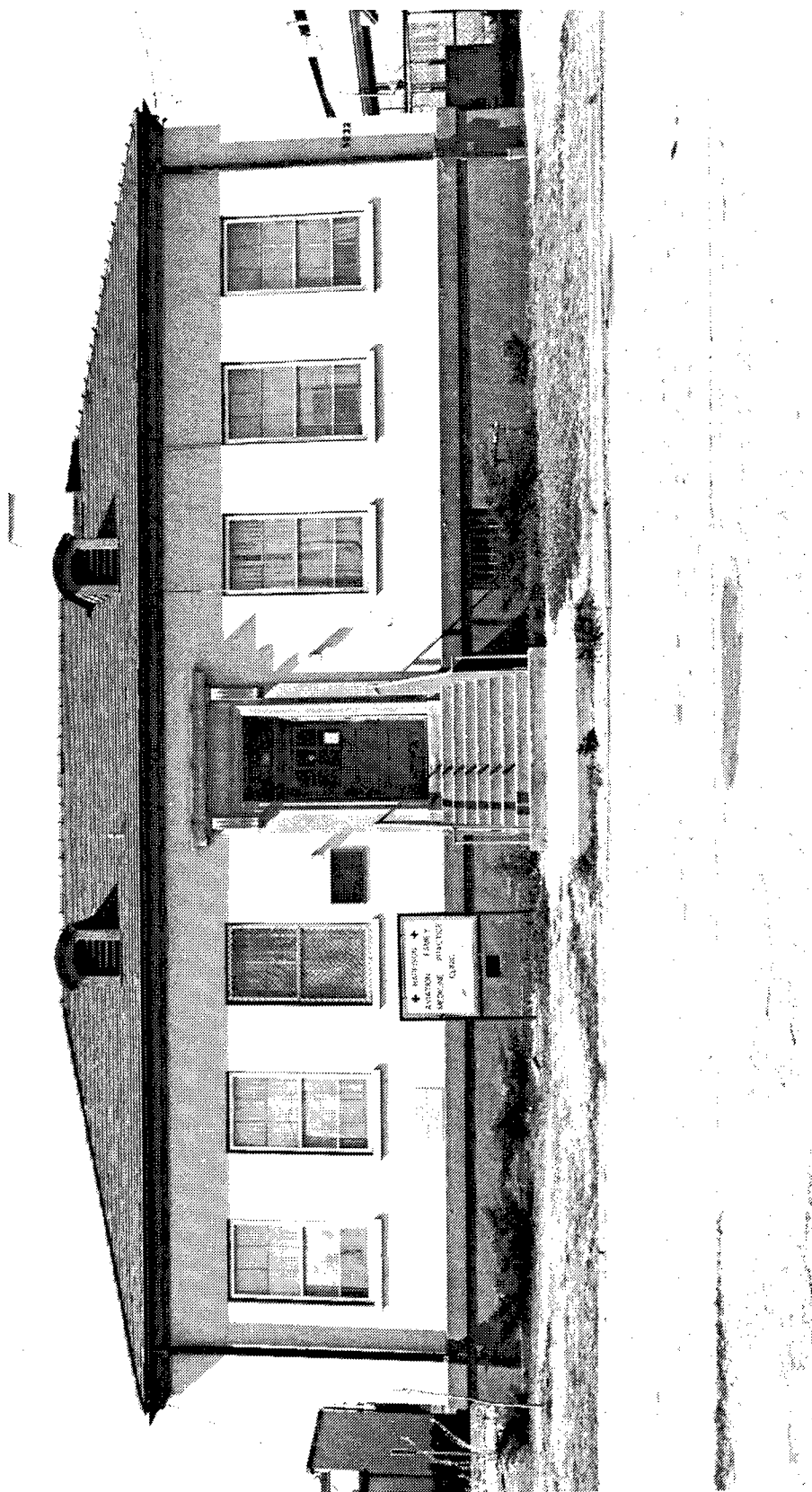


Figure 14. Building 5032, Clinic, without beds (photo courtesy of Fort Sill).

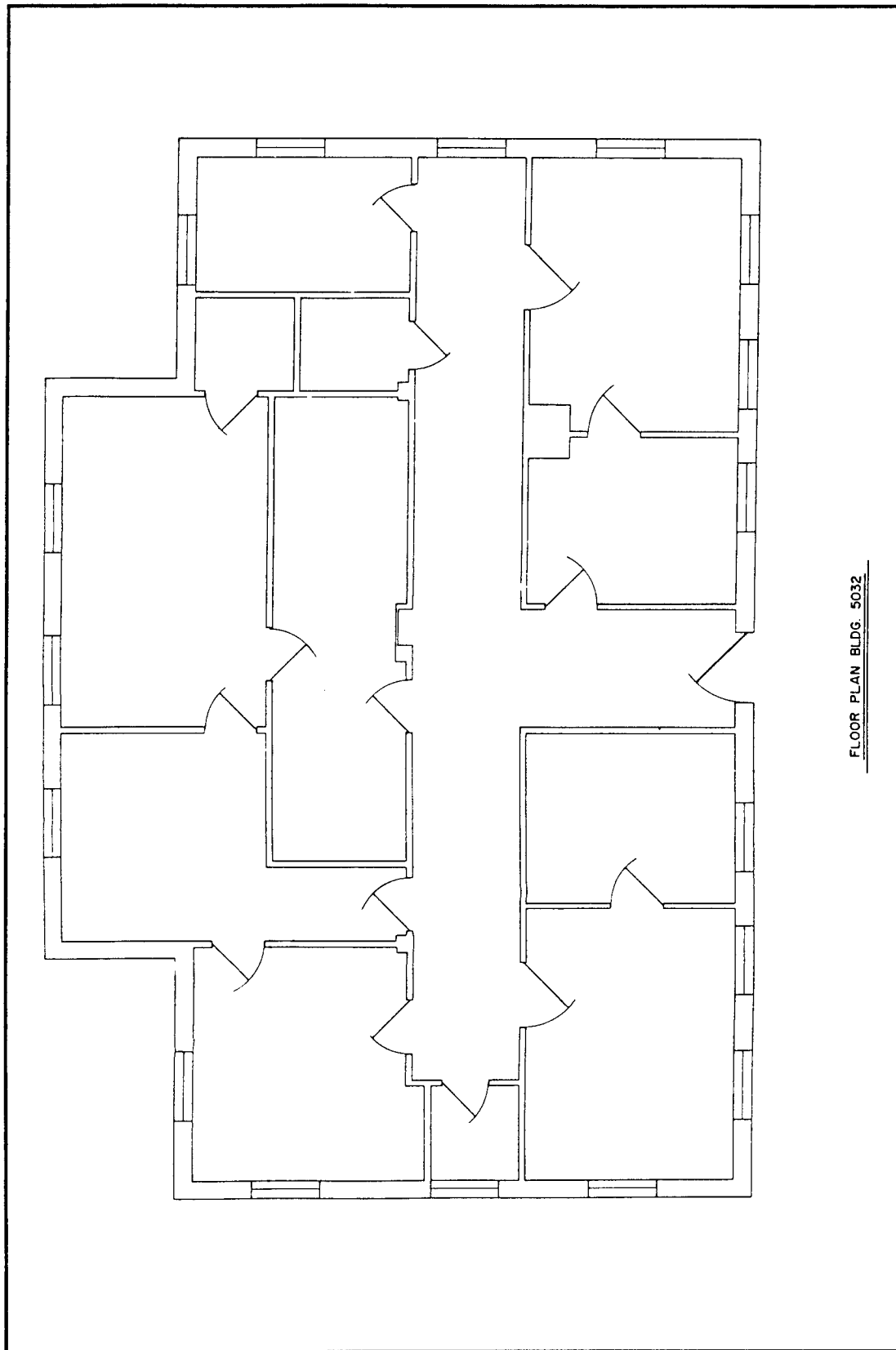


Figure 15. Building 5032, Clinic, without beds, floor plan (drawing courtesy of Fort Sill).

BUILDING 5033, CALIBRATION FACILITY, PLAN NUMBERS 634-235 THROUGH 634-240

Building 5033, completed in 1934, was originally built as a Quartermaster Garage and designated Building 7. The construction of the Military/Utilitarian-style garage was awarded to Henger Construction Company, Dallas, Texas, under Contract Number W6143 qm-37. Its original purpose was to provide space to house and repair Quartermaster Corps vehicles in use at Post Field; the building included a repair shop, storage room, and office (OCQM ca. 1934d:title page, 2, 7-8). The single-story building cost \$30,000 to erect; its 183-foot-by-68-foot dimensions enclosed approximately 13,000 square feet; and it was built with a concrete foundation, tile and stucco walls, and had a corrugated asbestos gable roof with end parapets (Real Property Record). Its functions were expanded to provide classroom facilities for mechanics students in May 1943 (OCQM n.d.:n.p.). According to the Real Property Record, the exterior was not then nor has it since been modified; interior modifications have included updating the electrical wiring, the installation of florescent lights, and the construction of a new rest room, all completed in the 1950s (Real Property Record). The building as it currently exists is shown in Figure 16, and its current floor plan is shown in Figure 17.

BUILDING 5037, AIRCRAFT MAINTENANCE FACILITY, PLAN NUMBER 6143-1115¹⁹

When first erected at Post Field in 1935, this building (then Building 2) served as a balloon hangar for Post Field (Klinger 1989:Post Field 1-Post Field 2). Unlike the other buildings constructed in the 1930s at Post Field, the Balloon Hangar was not new but was salvaged from Rockwell Field, California. That field was paid \$6,175 for dismantling the building and shipping it to Fort Sill. The Manhattan Construction Company, Oklahoma City, Oklahoma, was paid \$8,140 to pour a foundation for the building under Contract Number W6143 qm-51, and \$67,925 under Contract Number W6143 qm-81 to erect the building (OCQM ca. 1934f:2). The total cost of setting up the hangar and related infrastructure (utilities and hydrogen racks) came to \$108,500. Its dimensions were 126 feet by 222 feet, enclosing about 28,000 square feet of space; the structural steel skeleton and corrugated iron siding all came from Rockwell Field. Interior partitions were added to provide office space (Directorate of Public Works 1995a:111; OCQM ca. 1934f:2-3; Real Property Report).

In 1917 four balloon hangars had been built at Post Field, all of wood; three of these were destroyed by fire in 1927, and the last one was demolished by 1934 (DO 1992:n.p.). Klinger (1989:Post Field 1) notes that the hangar constructed in 1934, "due to its specific purpose and to the fate of the previous hangars [*sic*], is a very large open building constructed of steel girders covered with corrugated iron with long bays of clerestory windows along the sides." Its size and shape make this building a prominent feature at Post Field, and its design sets it apart from all other buildings in the area. It is Utilitarian/Industrial in style; has a gable roof with an observation tower on the north end; has sloped side walls with two rows of clerestory windows running the length of the building, the upper row now covered by metal siding; has large sliding doors on the north end of the building, their upper tracks extending beyond the building's sides; and has casement windows in the south end of the building (Klinger 1989:Post Field 1-Post Field 2). Due to settling, which has caused the cement floor to crack, the large balloon doors are not currently operable (Historic Preservation Associates 1989:4). It was most likely that the Army's first motorized blimp, sent to Post Field for testing by the First Balloon Company, was housed in this building.

¹⁹ Klinger (1989:Post Field 2) states that "[t]he original construction plans were based on O.Q.M.G. [Office of the Quartermaster General] Plan No. 6143-1094," but the Real Property Record on file at Fort Sill references Drawing Number 6143-1115.

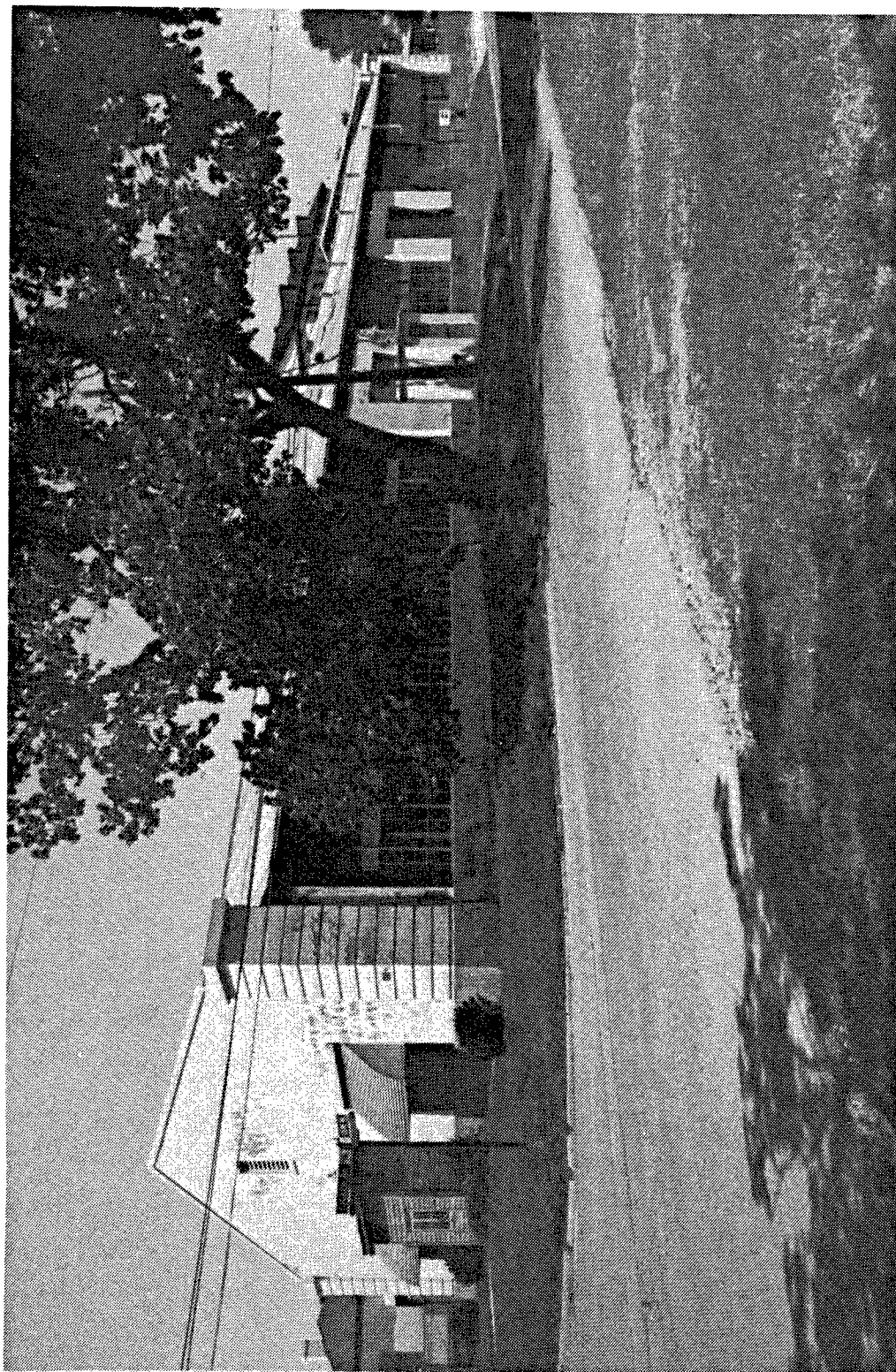
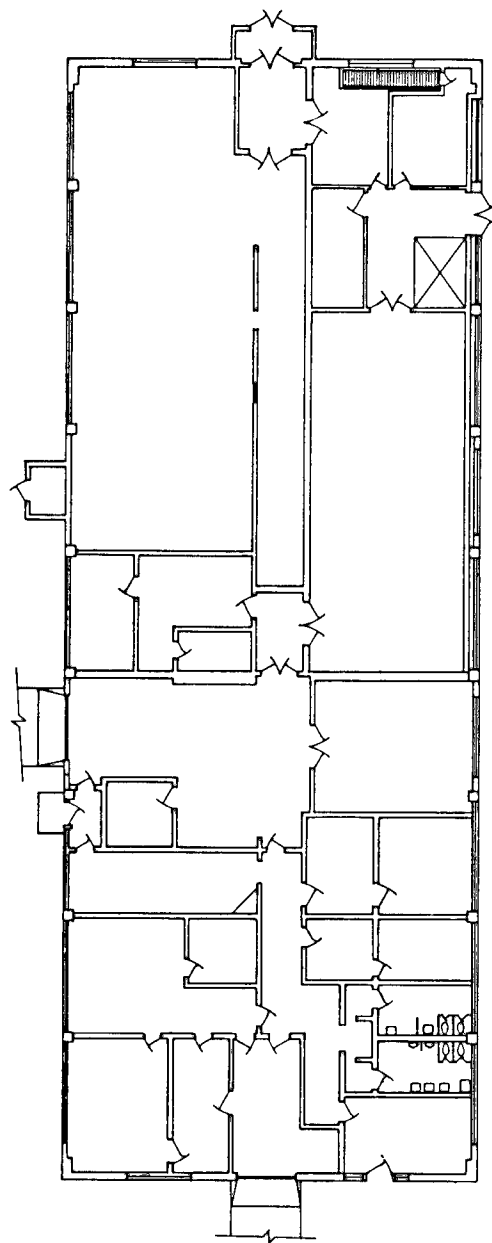


Figure 16. Building 5033, Calibration Facility.



FLOOR PLAN

Figure 17. Building 5033, Calibration Facility, floor plan (drawing courtesy of Fort Sill).

Both the interior and exterior of this hangar have undergone modifications since it was moved to Fort Sill, but the recent exterior modifications were carried out in a way that has not destroyed the visual impact of the building. Interior changes include updating the electrical wiring and lighting, installing cement block partition walls to create additional rooms, and constructing a parachute drying shaft during World War II (Historic Preservation Associates 1989:4). In 1982 the original 24-inch airport beacon on the observation tower was replaced by a 36-inch model (Real Property Report). In 1994, the original asbestos-coated corrugated iron siding covering the exterior was all replaced with corrugated steel that matched the original outer skin in color and design (Metzer 1994:6A; Orndorff 1993:4B; Spivey, informal interview 1995). The building as it currently exists is shown in Figure 18, and its current floor plan is shown in Figure 19.

BUILDING 5041, INFLAMMABLE Materials Storage, Plan Number 702-102

This small one-room building was originally called the Paint, Oil, and Dope House (initially designated Building 5). There is conflicting evidence as to the original cost of the building, with the Real Property Report showing a construction cost of \$3,580 and the Completion Report (Quartermaster ca. 1934e:5) listing a total cost of \$6,420; both were much less than the \$10,000 that was allotted for that purpose for fiscal year 1934 (Quartermaster ca. 1934e:2). The utilitarian-style building was constructed with a concrete foundation, reinforced concrete walls, and a built-up roof. Its dimensions of approximately 19 feet by 41 feet enclose 763 square feet of storage space (Real Property Record). The contractor for the project was the McMillen Construction Company, Enid, Oklahoma. Construction began in early 1934 and was completed by the end of April the same year (Quartermaster ca. 1934e:2-3, 5). The remaining original windows were three-light hoppers of wood construction; one wood door has four lights over three horizontal panels, and the other is a wooden flush panel door with vertical planks. The Real Property Record for this building indicates no modifications have been made since its construction; however, some of the window openings have been filled with concrete. The building as it currently exists is shown in Figure 20, and its current floor plan is shown in Figure 21.

BUILDING 5042, HEAT PLANT BUILDING, PLAN NUMBER UNKNOWN

The date of construction for this small building, originally Building 13, is not currently known. Although the Building Inventory Schedule lists the year of construction or acquisition as 1944, the QM 117 Records Book for Post Field and Concurrent Camp (Quartermaster n.d.:n.p.) shows that the building had minor repair work done in 1942 and that it was added to the inventory in 1944; the date of completion is given as unknown. The foundation and walls are all concrete, and the flat, slightly sloped roof is covered with sheet metal. The dimensions are approximately 10.5 feet by 11.5 feet, enclosing 119 square feet of space; in 1944, it was valued at \$240. Most of the building lies underground, there are no windows, and the entrance to the building is located on the roof, as are two aluminum vents. The entry door is a flush-panel metal unit with metal surround. This utilitarian-style building appears to have not been modified since 1942 (Real Property Record; Quartermaster n.d.:n.p.). The Heat Plant Building as it currently exists is shown in Figure 22, and its current floor plan is shown in Figure 23.

BUILDINGS 5051, 5053, 5054, 5087 THROUGH 5090, AND 5092, DETACHED GARAGES, PLAN NUMBER 6143-1015A

Buildings 5051, 5053, and 5054 are all four-car garages (originally buildings G-27, G-34, and G-36), all built in 1934 to provide parking and storage space for residents of the 12 noncommissioned officers' quarters in this immediate area (buildings 5060 through 5071). Each has 885 square feet of space, measures 41 feet by 21 feet, and was erected at for a cost of \$1,850. The other five garages that were also built in 1934 (buildings 5087 through 5090 and Building 5092) provided parking and storage space for residents of the

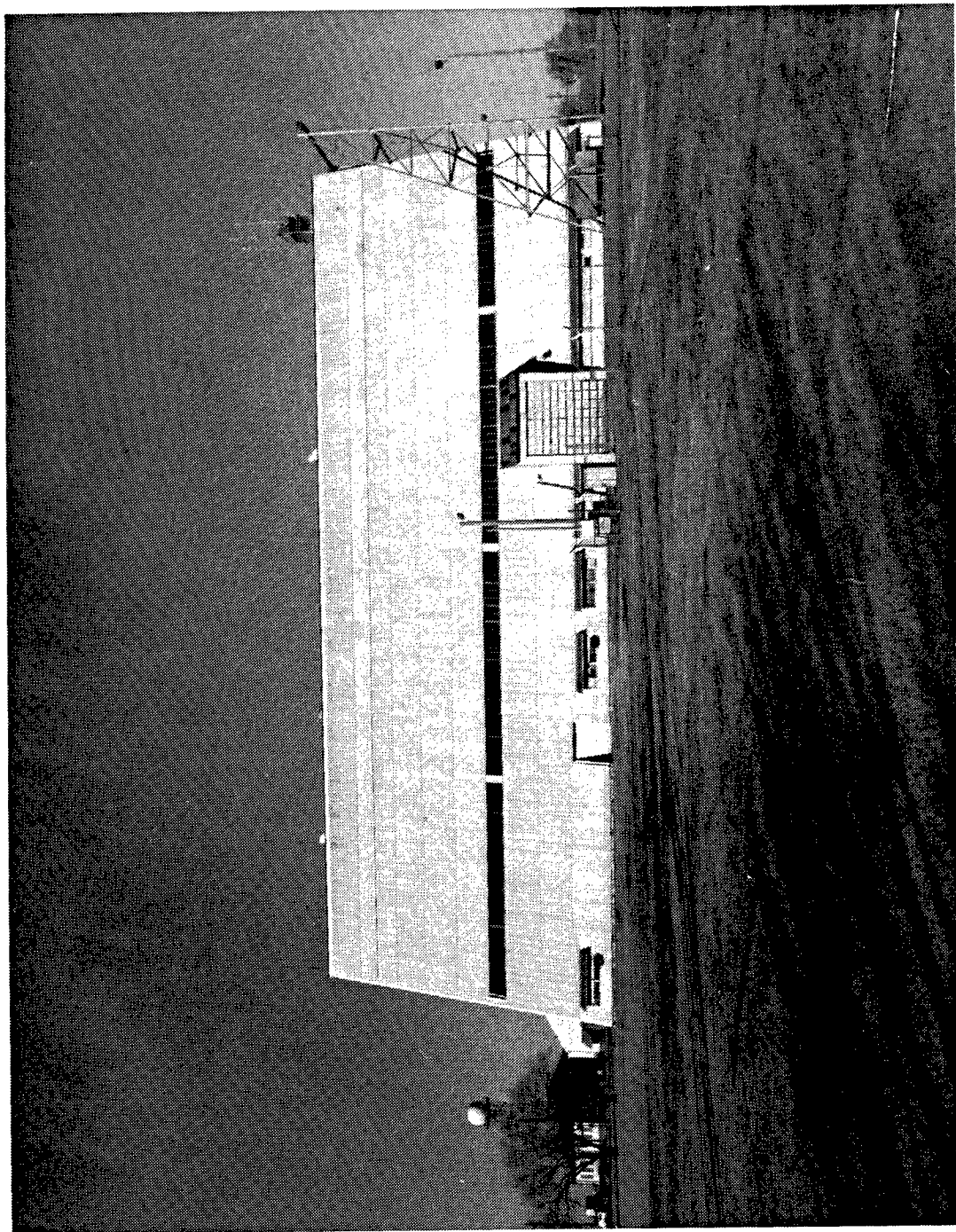
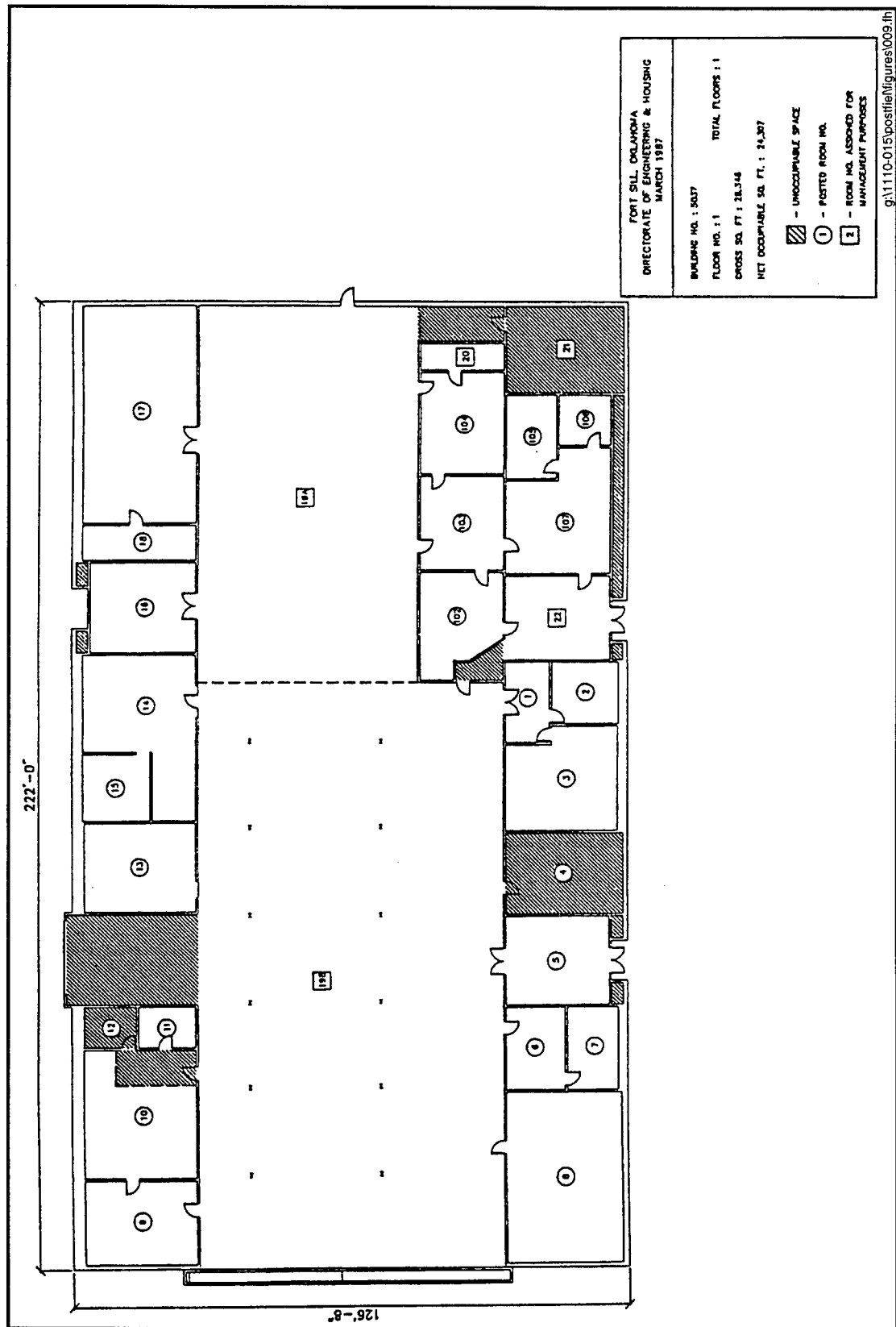


Figure 18. Building 5037, Aircraft Maintenance Facility (photo courtesy of Fort Sill).



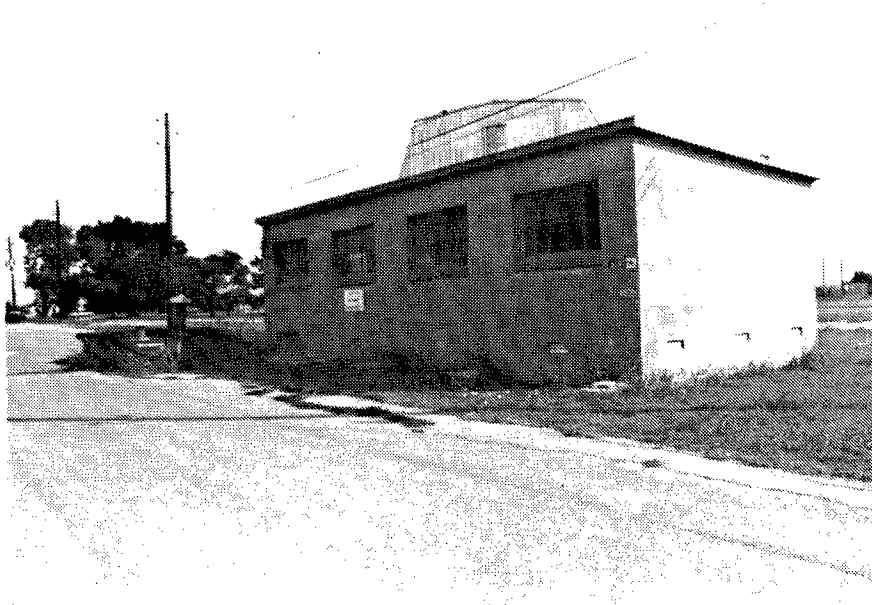


Figure 20. Building 5041, Inflammable Materials Storage.

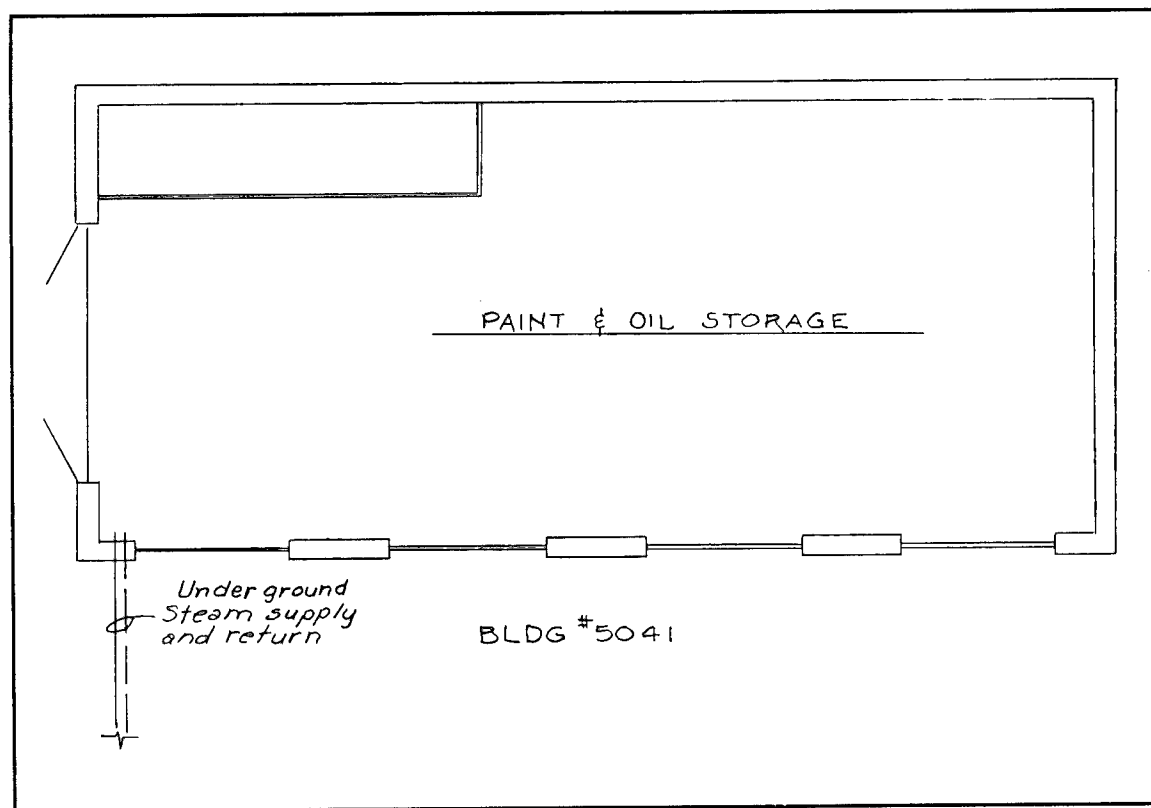


Figure 21. Building 5041, Inflammable Materials Storage, floor plan (drawing courtesy of Fort Sill).

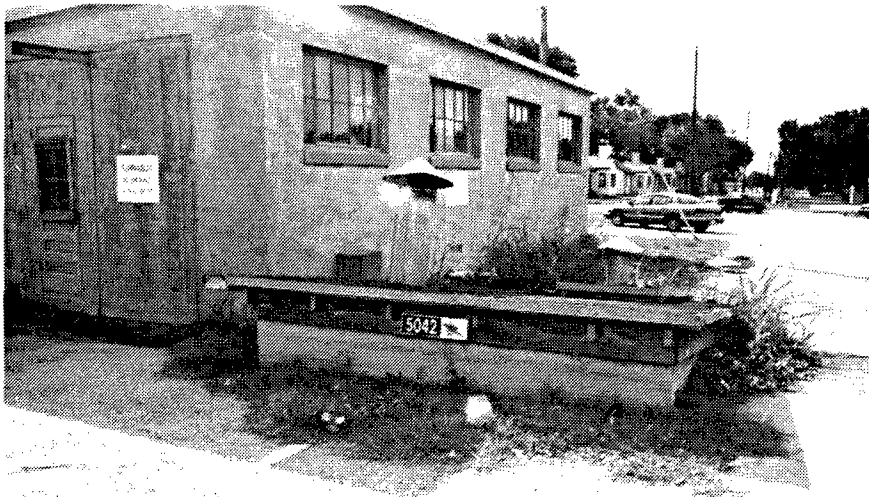


Figure 22. Building 5042, Heat Plant Building.

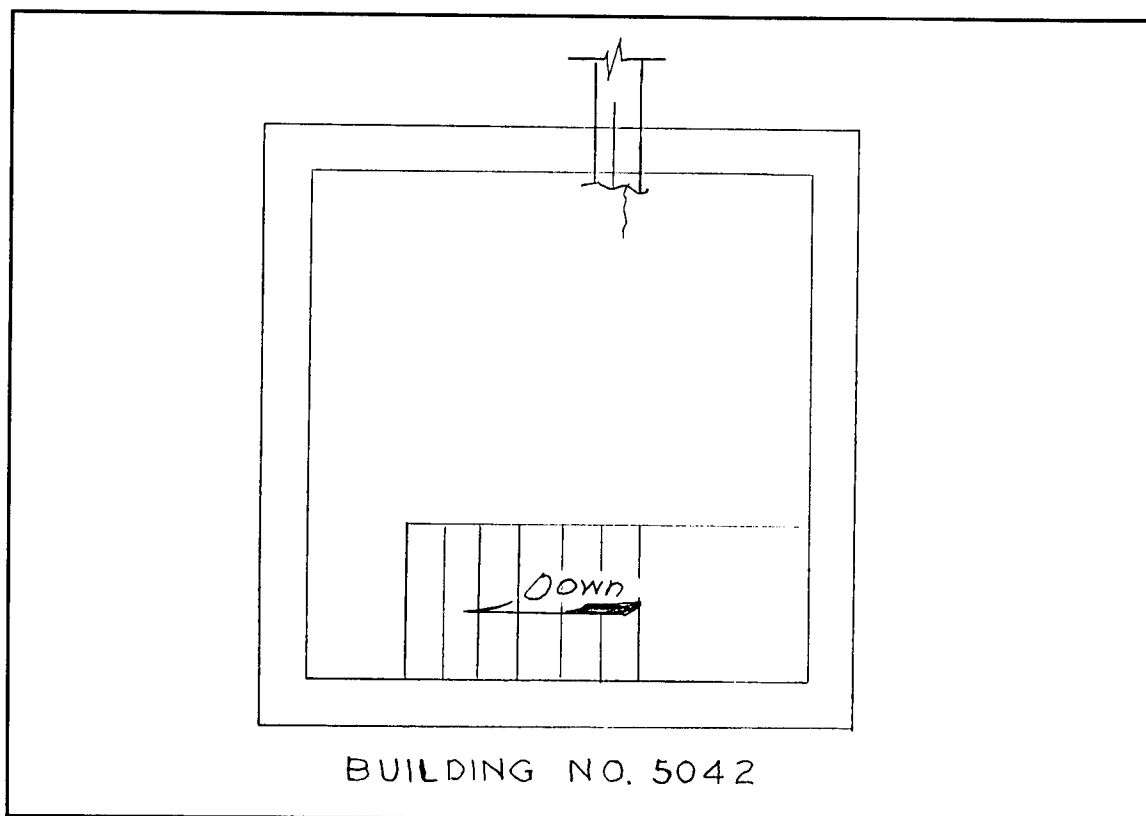


Figure 23. Building 5042, Heat Plant Building, floor plan (drawing courtesy of Fort Sill).

northern Rumble Road quarters (buildings 5075 through 5083). Building 5087 is a one-car unit, measures 10 feet by 21 feet, encloses 221 square feet of space, and was built for \$463. Buildings 5088 through 5090 and Building 5092 are all two-car units measuring 20 feet by 21 feet, enclosing 435 square feet of space, each built for \$925. All eight units were constructed in the Mission/Spanish Colonial Revival architectural style with concrete foundations, brick exterior walls finished with stucco (a variation on the stucco-covered clay tile of the residences these garages serviced), concrete coping, and flat roofs of built-up construction. The lack of clay tile on the roofs is a notable departure from the Mission/Spanish Colonial Revival style. The original wire mesh that divided the interior into bays has been replaced with frame walls, and in 1988 the original wood overhead doors were replaced with metal doors. None of the garages were built with windows (OCQM ca. 1934h:3, 6; Vogeles 1993:n.p.).

Historic Preservation Resource Identification Forms (Vogele 1993:various) for garages elsewhere at Fort Sill (buildings 577, 657, 658, 2050, 2052, 2054, and 2056) all reference the same Plan Number 6143-1015A, even though these buildings are for garages that range in size from one- to five-car buildings. It is probable that Quartermaster General Plan Number 6143-1015A, which showed five auto bays, was modified as needed to provide fewer bays. All 12 of these garages were built by the same contractor, DeWitt and Howard, Tulsa, Oklahoma, under Contract Number W6143 qm-15 (OCQM ca. 1934h:2, 6). An example of these buildings as they currently exist is shown in Figure 24, a photo of Building 5054, and a current floor plan for the five-bay version of this building is shown in Figure 25.

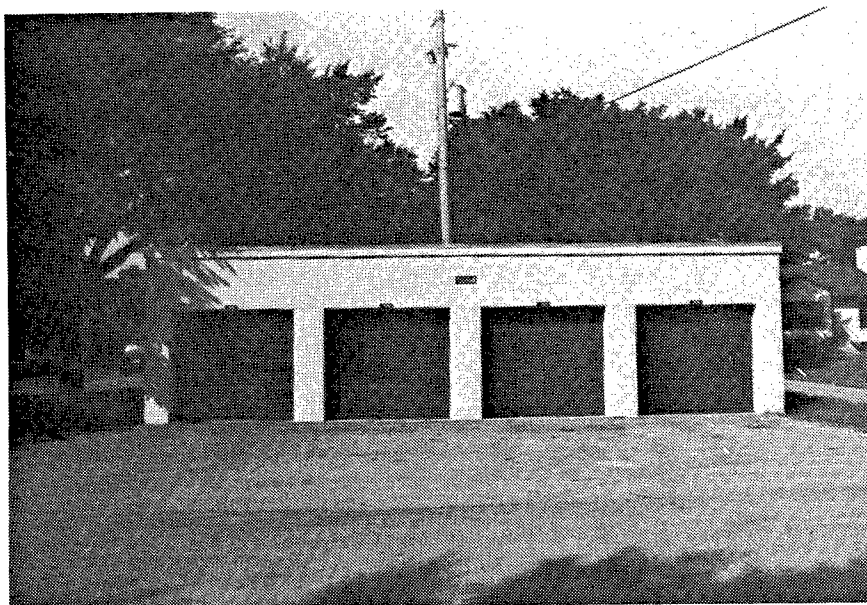


Figure 24. Building 5054, an example of a Detached Garage at Post Field.

BUILDINGS 5060 THROUGH 5071, FAMILY HOUSING FOR NONCOMMISSIONED OFFICERS AND ENLISTED TROOPS, PLAN NUMBERS 625-1551 THROUGH 625-1554 AND 625-1557

All 12 of these single-family residences were completed in 1933 and 1934, their purpose then to house noncommissioned officers and their families. All are Mission/Spanish Colonial Revival in style and have concrete foundations, oak floors, tile and stucco exterior walls, and combination hip and gable roofs covered with flat clay tile. These buildings were constructed under two different contracts, both awarded to the A.J. Rife Construction Company, Dallas, Texas (Rife Construction also built the Post Field Fire Station, Building

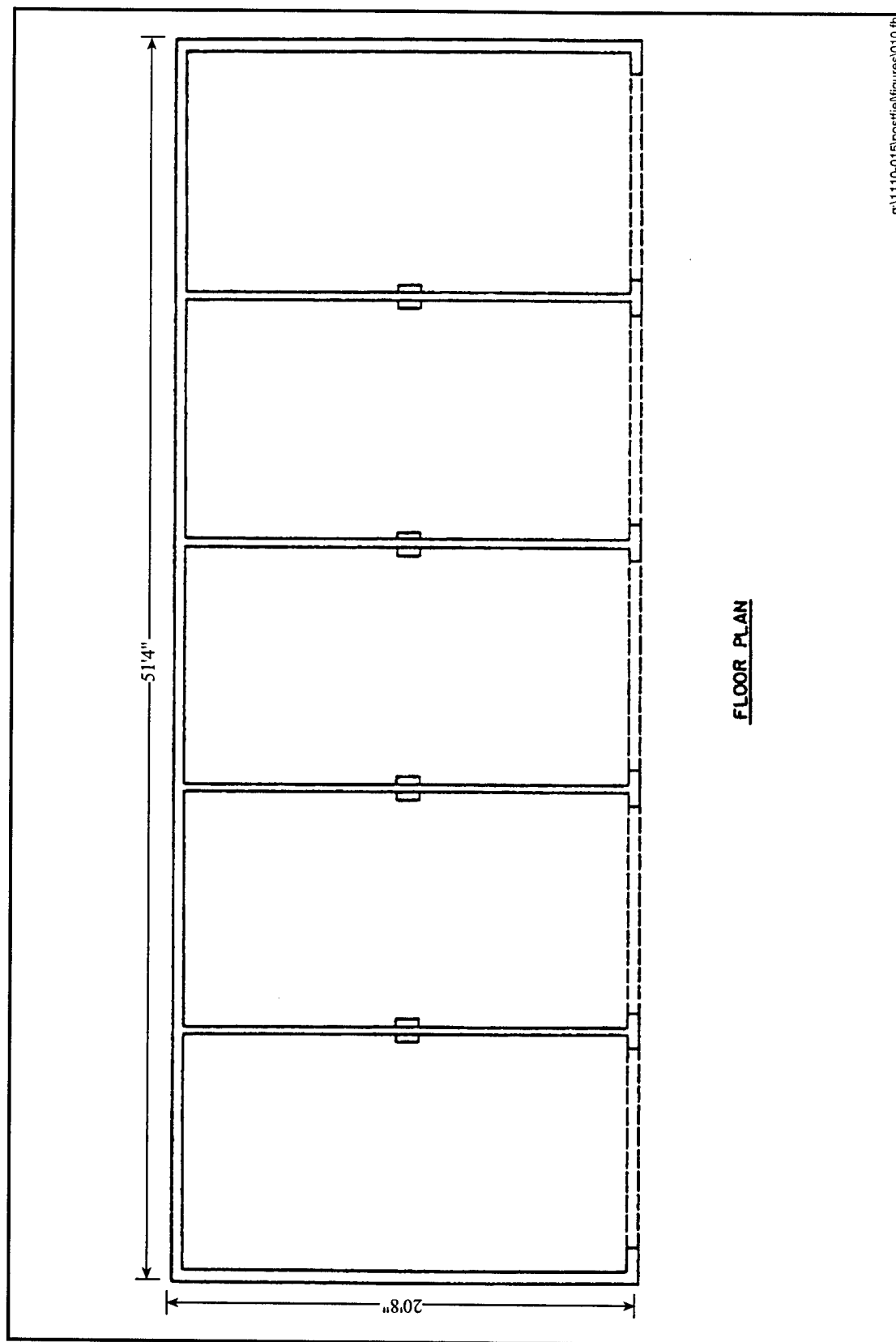


Figure 25. Floor plan for the five-bay detached garage; the standard size from which smaller versions could be derived (drawing courtesy of Fort Sill).

5031, discussed above). The funding for the first 10 residences (buildings 5062 through 5071) in the amount of \$84,000 was set aside for fiscal year 1933, for the purpose of constructing housing for 10 Air Corps officers (OCQM ca. 1933c:50-51). The work was awarded under Contract Number W6143 qm-5, and all 10 buildings were completed between November 1932 and August 1933 (OCQM ca. 1933c:59). The total cost to the government was reported in the Completion Report for these buildings to have been \$74,800, but the Real Property Records indicate each building cost \$6,707 (for a total cost of \$67,070—this figure probably does not include Quartermaster administrative costs). The main portion of each of these buildings measures 32 feet by 32 feet; the rear sleeping porch²⁰ measures 8 feet by 13 feet; the front porch measures 9 feet by 27 feet; and each building has a small basement. Including the porches, each residence contains a total of 2,330 square feet of living space (OCQM ca. 1933c:51; Real Property Records). The Real Property Records indicate a slight difference in the construction of four of the buildings (5068 through 5071), each of which was recorded as having a small additional porch approximately 5 feet square. Buildings 5060 and 5061 were funded as a part of a much larger project that covered the construction of 29 noncommissioned officers' residences at Fort Sill. This work was again awarded to A.J. Rife Construction, under Contract Number W6143 qm-19. The total cost of this project was reported in the Completion Report to have been \$221,600, but the Real Property Records for these two buildings indicate each cost \$7,283 (for a total of \$211,207 for all 29 buildings—this figure probably does not include Quartermaster administrative costs). The same plans that had been used for the first 10 quarters built in this area were also used for these buildings, and all the work was accomplished in 1934 (OCQM ca. 1934b:63; Real Property Records).

All 12 residences have been similarly modified during the intervening years, and most of the modifications have impacted only the interior. The Real Property Reports for these buildings indicate new cabinets, sinks, exhaust fans, and dishwashers have been installed in all kitchens; each house has been fitted with a central heating and air conditioning unit; the electrical wiring and plumbing have been updated; asbestos has been removed (from where is unknown); and window screens have been installed in all rear porches. Minimal, reversible, change to the exterior has been effected by the installation of storm windows and doors on most units—buildings 5068 and 5071 have only had storm windows installed, and buildings 5069 and 5070 have had neither storm windows nor doors installed (Real Property Report). An example of these buildings as they currently exist is shown in Figure 26, and a current floor plan is shown in Figure 27.

BUILDINGS 5075 THROUGH 5077 AND 5080 THROUGH 5083; FAMILY HOUSING, LIEUTENANT COLONEL/MAJOR; PLAN NUMBERS 625-2448 THROUGH 625-2454 AND 625-2456

These seven buildings were originally built as company officers' quarters and designated buildings 51 through 54 and 57 through 59. Their construction was funded for fiscal year 1933, when \$140,000 (later reduced to \$126,000 by the Economy Bill of 1932) was allotted for the construction of two field officers' quarters and seven company officers' quarters at Post Field. These nine buildings are the nine residences on the north end of Rumble Road; the two field officers' quarters are discussed in the section immediately following this section. The construction contract (Contract Number W6143 qm-7) covered all nine buildings and was awarded to the Holmboe Construction Company, Oklahoma City, Oklahoma; all work was undertaken between November 1932 and August 1933. The Quartermaster complained that the company was disorganized, and had no equipment of its own, and that the quality of the work it oversaw was less than desirable. Most of the work was accomplished by subcontractors, and Holmboe Construction "used every conceivable subterfuge to avoid paying the prevailing rates of wages. The contractor sublet labor to irresponsible subcontractors, groups of men, etc., in an endeavor to avoid proper payments" (OCQM ca. 1933d:8-9). Holmboe Construction had also won the contract to build a barracks (Building 5030) at Post Field, and their work on that project earned the same comments.

²⁰ There is an inconsistency between the terms used in the Completion Report for these 10 buildings and the Real Property Records. The former (OCQM ca. 1933b:3) calls this section of the building a sleeping porch, while the latter terms it a wing.

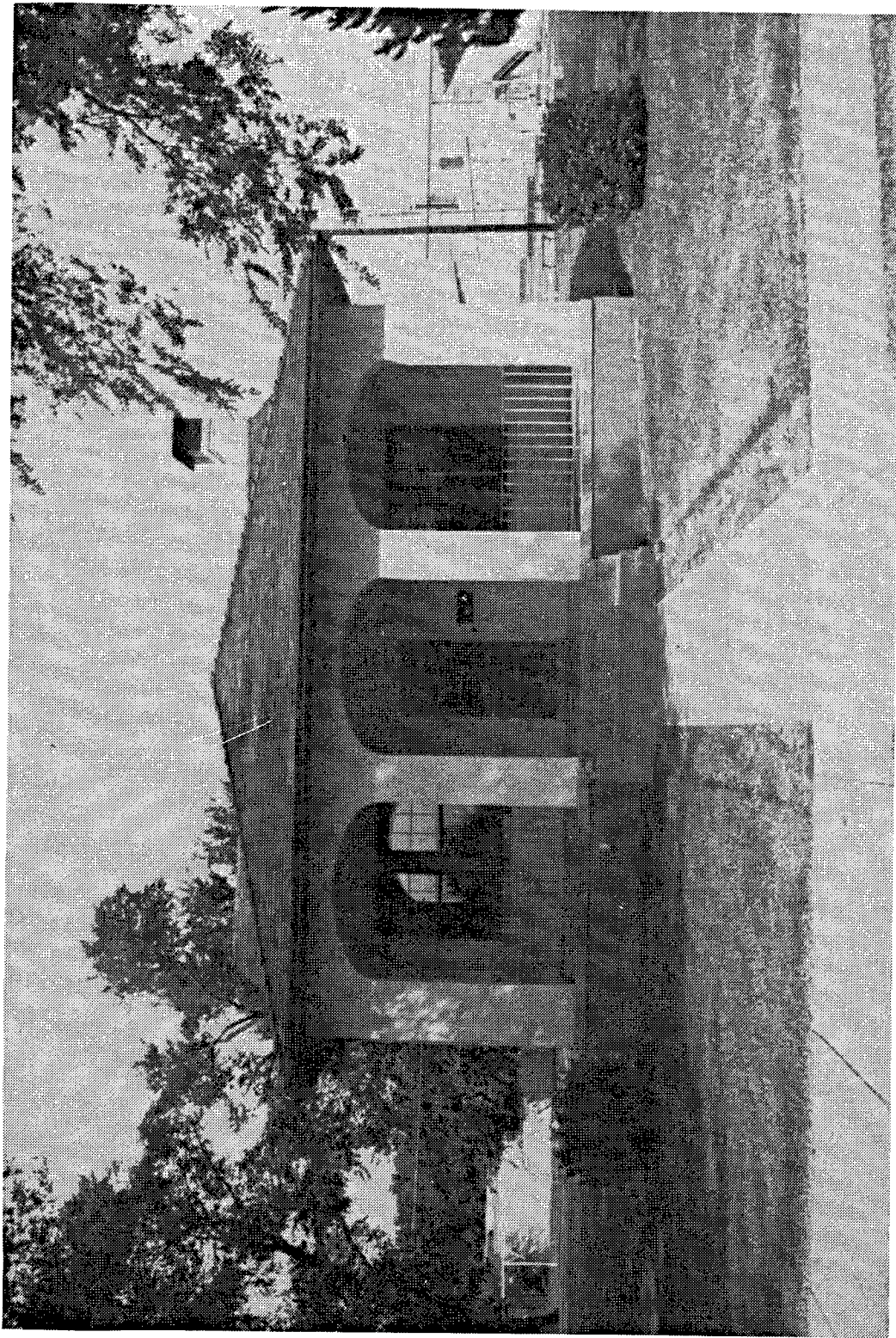


Figure 26. Building 5070, an example of a Family Housing unit for noncommissioned officers and enlisted troops constructed at Post Field.

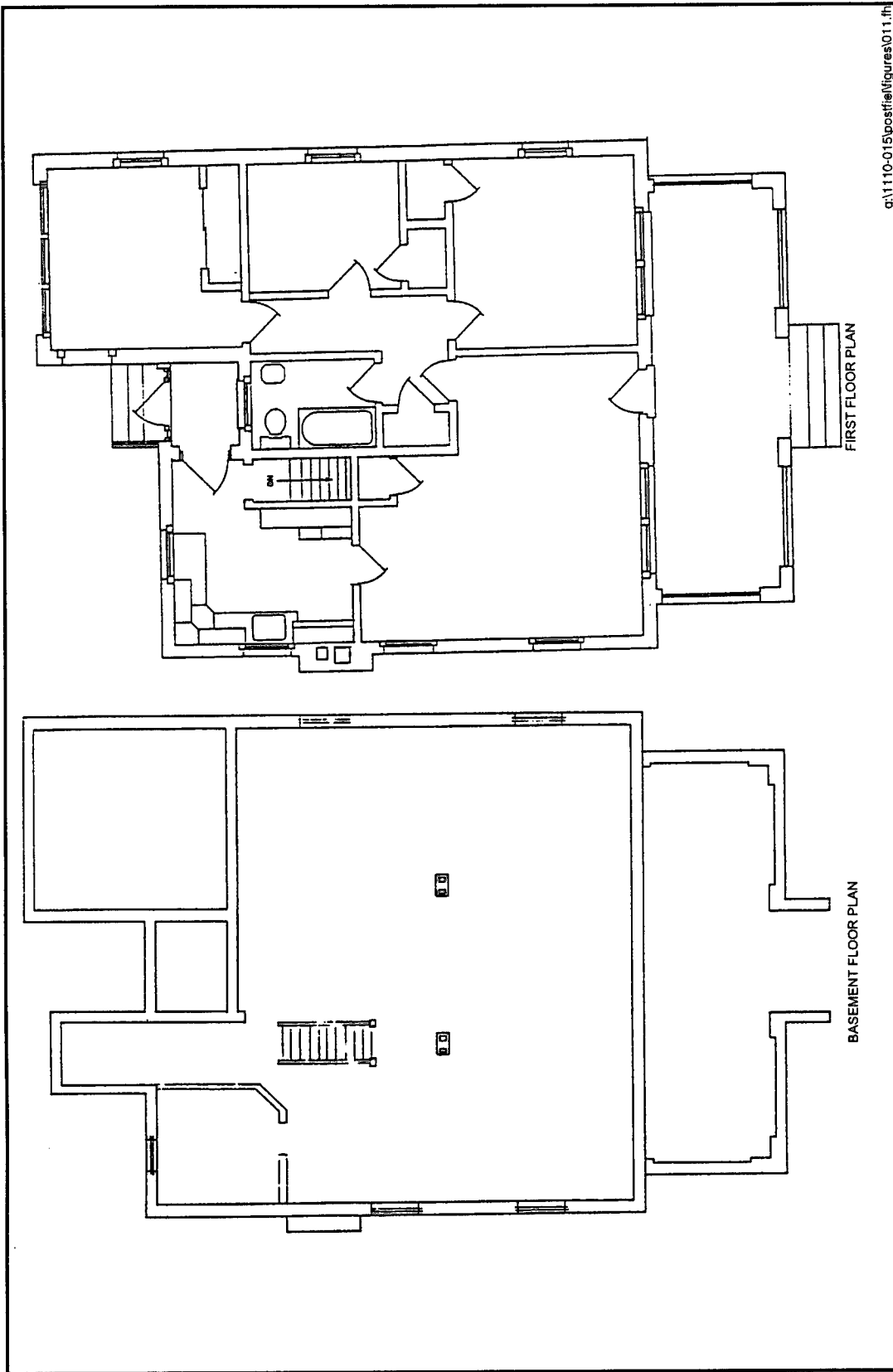


Figure 27. Basement and first floor plans for buildings 5060 through 5071, Family Housing units for noncommissioned officers and enlisted troops constructed at Post Field (drawings courtesy of Fort Sill).

These seven single-family residences were all two-story buildings with basements, designed in the Mission/Spanish Colonial Revival architectural style; each enclosed about 4,500 square feet of living space (this square footage figure includes the porches; the seven houses were slightly smaller than the field officers' quarters). They all were constructed with concrete foundations, oak floors, and tile and stucco exterior walls, with side-gabled flat clay tile roofs and shed porches. The rooms in buildings 5075 and 5076 were oriented as shown in the Quartermaster plans, but those in buildings 5077 and 5080 through 5083 were reversed, so that rooms on the left in the drawing were actually built on the right, and vice versa. Decorative exterior elements included exposed rafter tails, gable wall chimneys, rectangular gable end wood vents, and the full-length three-bay arcaded porches. Copper gutters and downspouts were probably installed when the buildings were first constructed, and the front porch was most likely screened in then as well. The first floor of each included a living room with a fireplace and shelves; dining room; kitchen; pantry with cabinets; and servant's quarters, with attached closet and bathroom. The rooms on the second floor included a master bedroom with attached closets and bathroom; sleeping porch; two smaller bedrooms with closets; and a separate bathroom. Heat was provided by hot-water radiators. All but one of the windows were double hung six-over-six light units, the one exception being a second-story double hung four-over-four light unit in the rear of the house (Klinger 1989:Post Field 3-Post Field 11, Post Field 18-Post Field 29; Real Property Records). The interior of Building 5081 was more fully described by Klinger (1989:Post Field 21-Post Field 22), wherein he noted there were "two sets of eight light French doors off the front porch; a built-in china hutch with complex arched multi-light glass doors; a built-in telephone hutch; . . . downstairs bathroom with the original black and white floor and wall tile, commode, tub and tub fixtures and modern lavatory; kitchen with the original porcelain covered cabinet top; upstairs bathroom with the original black and white floor and wall tile, commode, tub and tub fixtures and modern lavatory; and a stairway banister which has been stained and varnished with simple painted balustrades consistent with the 500 block buildings."

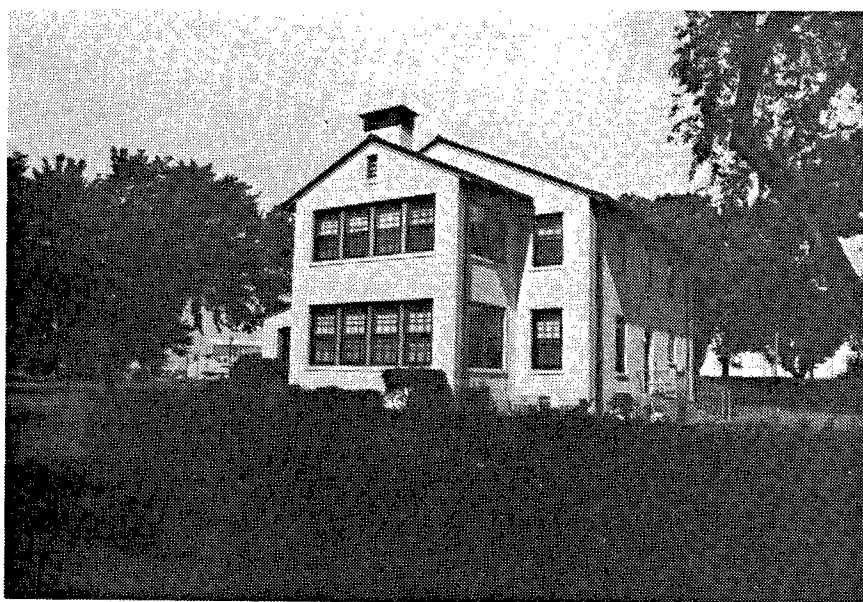
Modifications have been minimal and have not in general detracted from the integrity of these buildings. The electrical wiring has been updated, original shutters have been removed, and aluminum screens have been placed on all windows (Klinger 1989:Post Field 3-Post Field 4). Building 5081 may have been altered slightly more as Klinger (1989:Post Field 22) found the porch configuration different from what was shown on 1942 drawings of the building. An example of these buildings as they currently exist is shown in Figure 28, and a current floor plan is shown in Figure 29.

BUILDINGS 5078 AND 5079; FAMILY HOUSING, LIEUTENANT COLONEL/MAJOR; PLAN NUMBERS 625-1350 THROUGH 625-1356

These two buildings were originally built as field officers' quarters and designated buildings 55 and 56. Funds for their construction were slated for use during fiscal year 1933, when \$140,000 (later reduced to \$126,000 by the Economy Bill of 1932) was allotted for the construction of two field officers' quarters and seven company officers' quarters at Post Field (these nine buildings are the nine residences on the north end of Rumble Road; the other seven buildings are discussed in the section immediately preceding). The construction contract (W6143 qm-7) was awarded to the Holmboe Construction Company, Oklahoma City, Oklahoma, and all work was undertaken between November 1932 and August 1933. The Quartermaster complained that the company was disorganized, and had no equipment of its own, and that the quality of the work it oversaw was less than desirable. Most of the work was accomplished by subcontractors, and Holmboe Construction "used every conceivable subterfuge to avoid paying the prevailing rates of wages. The contractor sublet labor to irresponsible subcontractors, groups of men, etc., in an endeavor to avoid proper payments" (OCQM ca. 1933d:8-9). Holmboe Construction had also won the contract to build a barracks (Building 5030) at Post Field, and their work on that project earned the same comments.

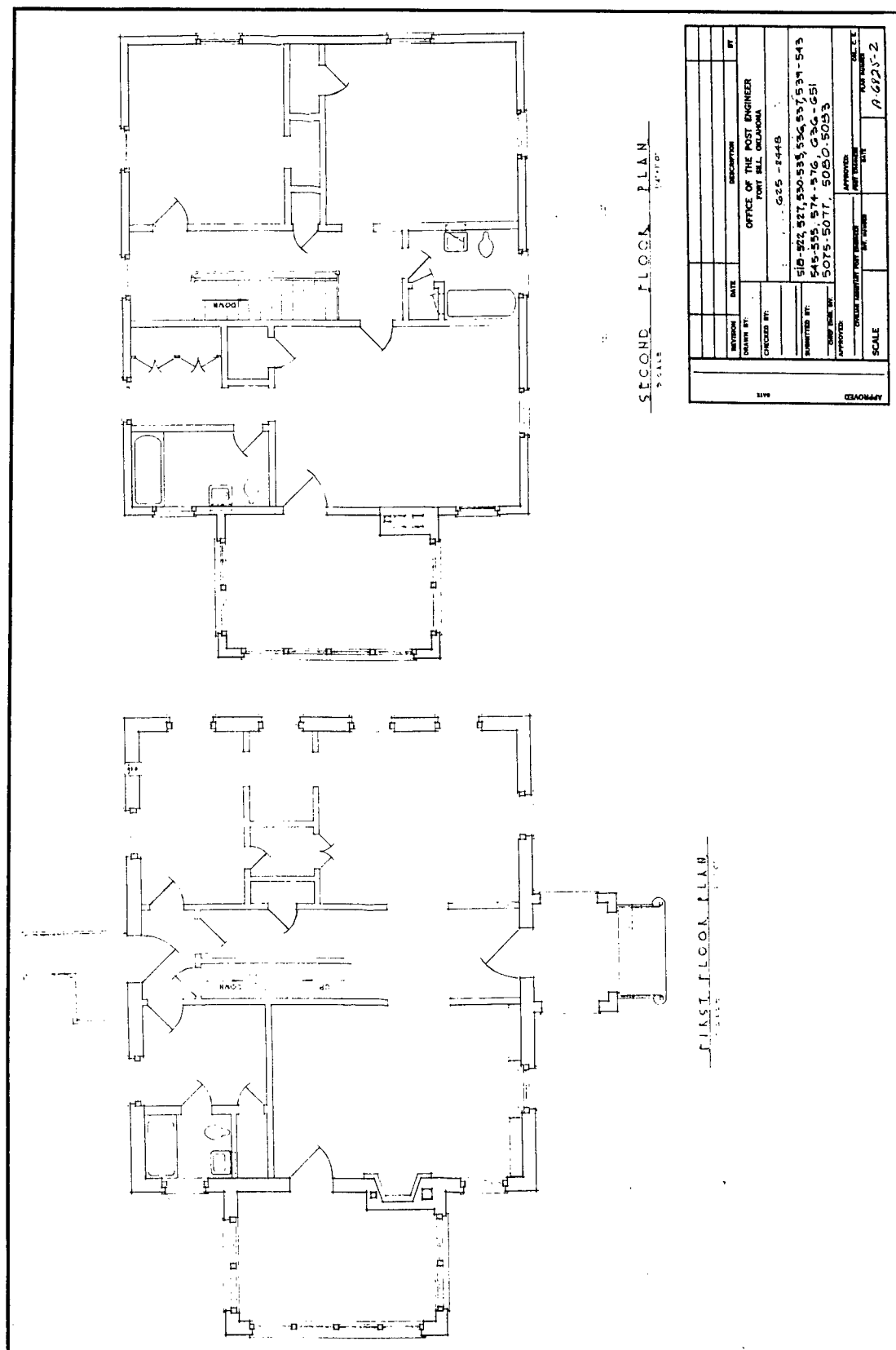


a



b

Figure 28. Building 5077, an example of the Family Housing units for Lieutenant Colonel and Major along the north end of Rumble Road: (a) front elevation; (b) rear elevation and east side.



These two single-family residences are both two-story buildings with basements, designed in the Mission/Spanish Colonial Revival architectural style; each encloses about 4,900 square feet of living space (this square footage figure includes the porches; these two houses are slightly larger than the company officers' quarters). Both 5078 and 5079 were constructed with concrete foundations, oak floors, and tile and stucco exterior walls, with side-gabled flat clay tile roofs and shed porches; they matched the other seven residences on the north end of Rumble Road. Decorative exterior elements included exposed rafter tails, gable wall chimneys, rectangular gable end wood vents, and the full-length three-bay arcaded porches. Copper gutters and downspouts were probably installed when the buildings were first constructed, and the front porch was most likely screened in then as well. The first floor of each included a living room with a fireplace and shelves; dining room; kitchen; pantry with cabinets; and servant's quarters, with attached closet and bathroom. The rooms on the second floor included a master bedroom with attached closets and bathroom; sleeping porch; two smaller bedrooms with closets; and a separate bathroom. Heat was provided by hot-water radiators. All but one of the windows are double hung six-over-six light units, the one exception being a second-story double hung four-over-four light unit in the rear of the house (Klinger 1989:Post Field 3-Post Field 25; Real Property Records).

Modifications have been minimal and have not in general detracted from the integrity of these two buildings. The electrical wiring has been updated, original shutters have been removed, and aluminum screens have been placed on all windows (Klinger 1989:Post Field 3-Post Field 4). An example of these buildings as they currently exist is shown in Figure 30, and a current floor plan is shown in Figure 31.

BUILDING 5091, DISTRIBUTION TRANSFORMER BUILDING, PLAN NUMBER UNKNOWN

This small one-room building, utilitarian in architectural style, was originally called the Transformer Vault (Building 100), and it was completed in 1933 for a cost of \$500. It measures 9.5 feet square, encloses 90 square feet of space, has a concrete foundation, clay tile walls with stucco finish, and an asphalt shingle roof (Building Information Schedule; Real Property Record). The Real Property Record indicates no modifications have been made to this buildings since it was constructed. The building as it currently exists is shown in Figure 32. No floor plans for this building were on file at Fort Sill.

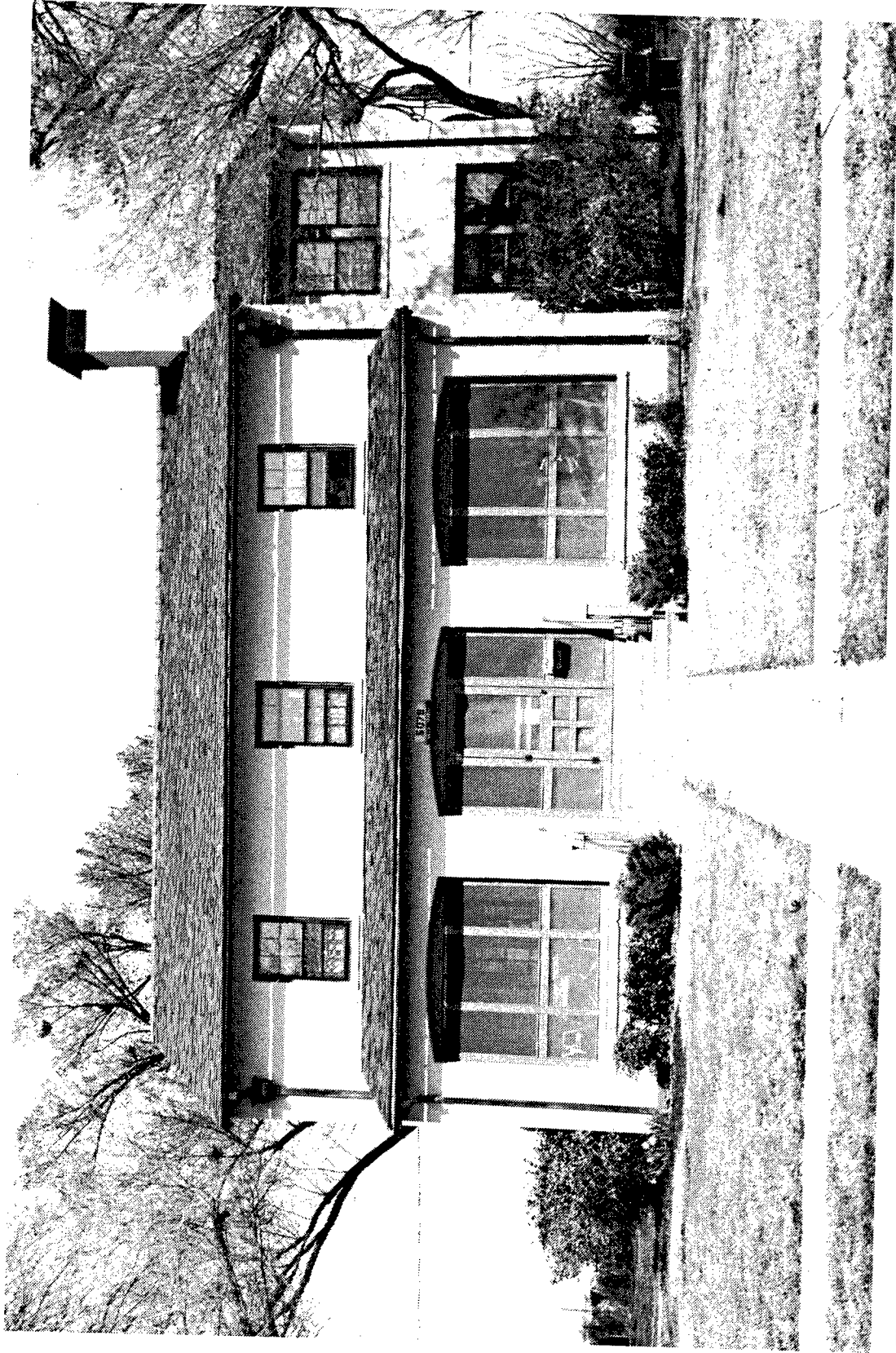


Figure 30. Building 5079, Family Housing, Lieutenant Colonel and Major (photo courtesy of Fort Sill).

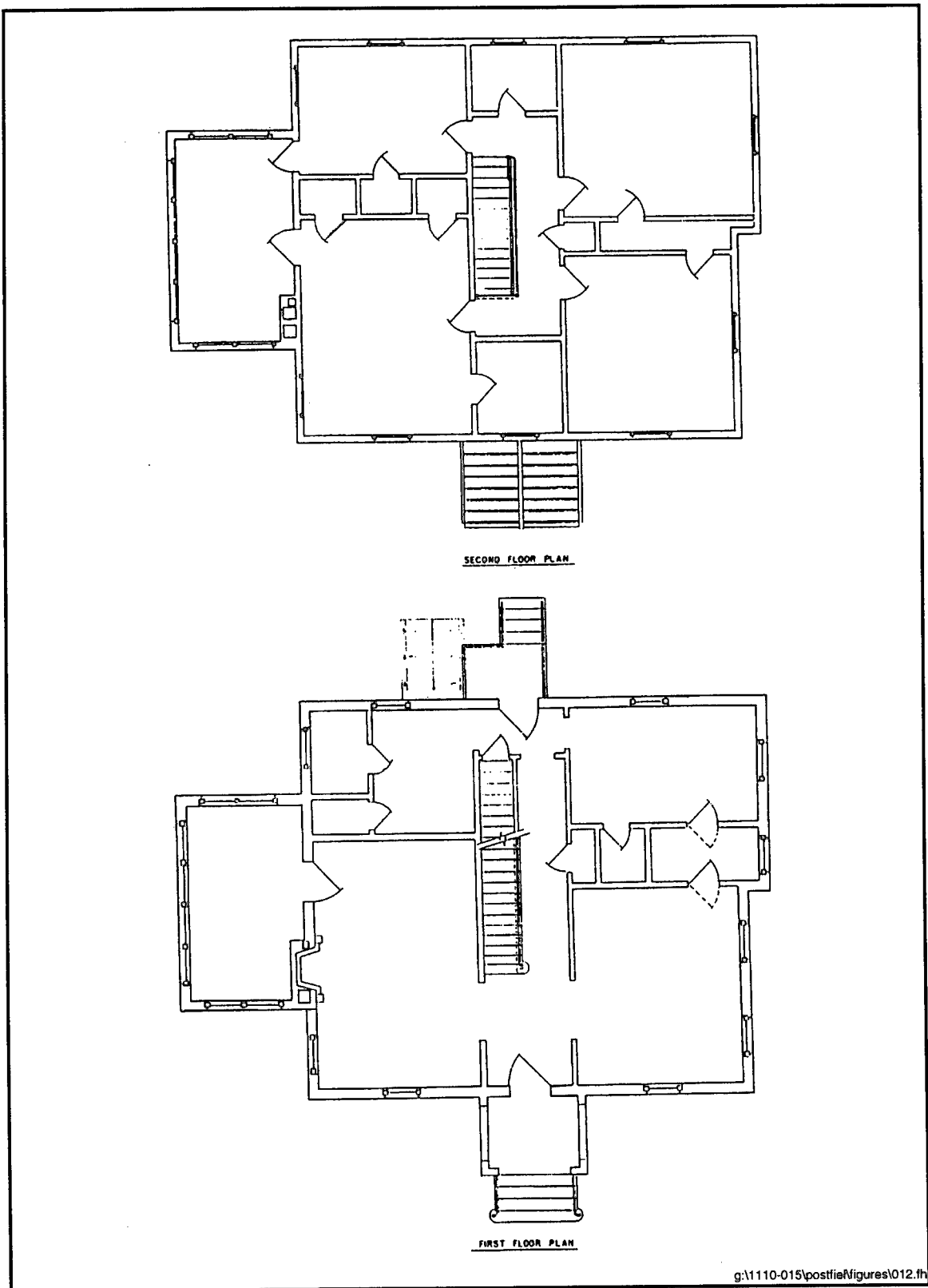


Figure 31. Building 5079, Family Housing, Lieutenant Colonel and Major, first and second floor plans (drawings courtesy of Fort Sill).

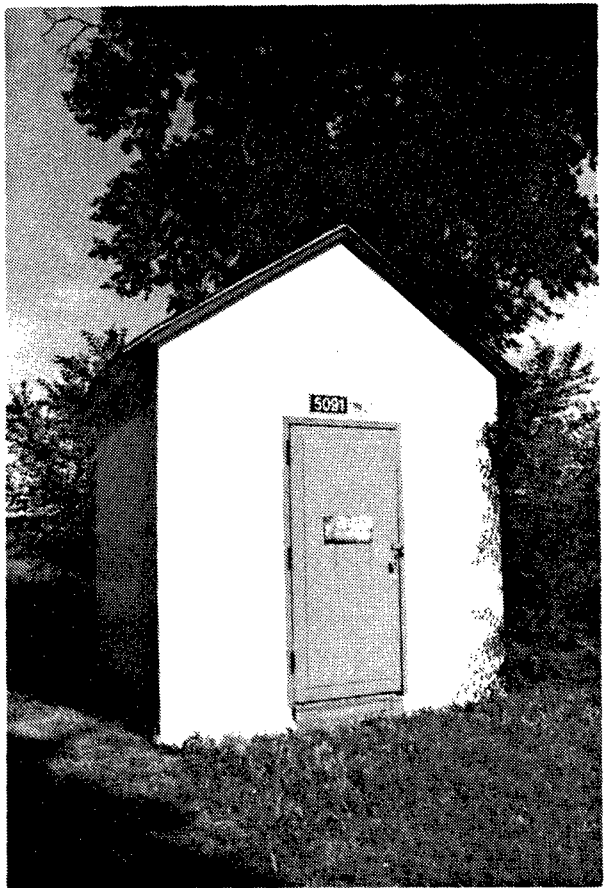


Figure 32. Building 5091, Distribution Transformer Building.

CHAPTER 5

FORT SILL PROPERTY TYPES AT POST FIELD

INTRODUCTION

The 38 buildings considered to be contributing elements of the proposed Post Field Historic District are categorized into five different property types—hangars, housing, support, storage, and utility and infrastructure facilities. The majority of these buildings are classified as housing. This property type includes all the houses, their associated garages, and Building 5030, originally a barracks building. Two buildings are classified as hangars, three as support, one as storage, and two as utility and infrastructure facilities. A description of the buildings, the significance, and the registration requirements are discussed for each property type below.

HANGARS

Description

Hangars are unique to aerial operations facilities like Post Field. Their primary function was and is the storage of aircraft, but at Post Field prior to the end of World War II, they served a variety of other functions as well, providing office space, repair facilities, and even a photographic laboratory. Although several examples of this type of building were constructed at the field during the period covered by this context, only two remain—Building 4908, originally called the Double Plane Hangar, and Building 5037, originally a balloon hangar. Both were constructed with steel skeletons, the former with clay tile curtain exterior walls and the latter with corrugated sheet iron exterior walls. The choice of building materials for the hangars, like that for many other buildings built during the 1930s, was influenced by the high incidence of fire at Post Field and in other areas at Fort Sill. Several wood hangars built during mobilization for World War I had been destroyed by fire by the time these two hangars were built. Additional hangars have been constructed at Post Field during the years since World War II, but none are located in the proposed Post Field Historic District.

Significance

The two hangars in the proposed Post Field Historic District may be eligible for inclusion in the National Register of Historic Places under Criterion A because of their association with the establishment of Army

Aviation at Post Field. From its beginnings at this facility, Army Aviation has grown to be an invaluable part of the U.S. Army, providing organic air support for ground force units.

Registration Requirements

The hangars in the proposed Post Field Historic District should be associated with the historic context in *The First Thirty Years: Post Field and Its Role in Military Aviation, 1915-1945*. The hangars should retain their integrity of location and the principal architectural elements that identify them as pre-World War II hangars. Alteration of these buildings may be grounds for disqualification.

HOUSING

Description

Housing in the proposed Post Field Historic District includes single-family units and their associated garages that were occupied by commissioned and noncommissioned officers, and barracks occupied by enlisted personnel. The earliest housing was built while the First Aero Squadron was located at the field in 1915; housing facilities were expanded by World War I mobilization construction. None of these buildings remain standing. Between 1932 and 1935, 21 single-family houses and eight multiple-bay garages were built at the field, and in 1933 one 188-person barracks was constructed. All of these were permanent buildings built in the Mission/Spanish Colonial Revival architectural style, their construction prompted by the need to ease dependence on World War I-era mobilization housing units, which had become dilapidated. At least six more barracks were built in the proposed district during the first year of U.S. involvement in World War II, all of which were temporary mobilization buildings. Only the permanent buildings built during the first half of the 1930s are considered contributing elements of the proposed historic context. Examples of these buildings are the single-family homes and associated garages on Rumble Road, buildings 5075 through 5083 and 5087 through 5092 (excluding 5091). The barracks built in 1933 is Building 5030, which currently serves an administrative function.

Significance

Housing in the proposed Post Field Historic District may be eligible for inclusion in the National Register of Historic Places under Criterion A because of its association with the establishment of Army Aviation at Post Field. From its beginnings at this facility, Army Aviation has grown to be an invaluable part of the U.S. Army, providing organic air support for ground force units. The housing units also may be eligible for inclusion in the National Register of Historic Places under Criterion C because they are all excellent examples of the Mission/Spanish Colonial Revival architectural style adopted by the War Department for construction in southern and southwestern states during the late 1920s and early to mid-1930s.

Registration Requirements

The housing units in the proposed Post Field Historic District should be associated with the historic context in *The First Thirty Years: Post Field and Its Role in Military Aviation, 1915-1945*. The buildings should retain their integrity of location and the principal architectural elements that identify them as pre-World War II housing facilities. Alteration of these buildings may be grounds for disqualification.

SUPPORT FACILITIES

Description

Support facilities in the proposed Post Field Historic District include buildings with a variety of functions. The earliest support buildings were built while the First Aero Squadron was located at the field in 1915, examples of which were the mess halls. Other support buildings such as recreation halls were built during World War I mobilization. None of these buildings remain standing. In 1934, three support facilities were built—Building 5031, the Fire Station; Building 5032, originally called the Post Field Dispensary; and Building 5033, originally called the Quartermaster Garage. All of these permanent buildings were built in the Mission/Spanish Colonial Revival architectural style. Additional support facilities were built during World War II mobilization, all of which were temporary buildings.

Significance

Support facilities in the proposed Post Field Historic District may be eligible for inclusion in the National Register of Historic Places under Criterion A because of their association with the establishment of Army Aviation at Post Field. From its beginnings at this facility, Army Aviation has grown to be an invaluable part of the U.S. Army, providing organic air support for ground force units. The support facilities also may be eligible for inclusion in the National Register of Historic Places under Criterion C as examples of the Mission/Spanish Colonial Revival architectural style adopted by the War Department for construction in southern and southwestern states during the late 1920s and early to mid-1930s.

Registration Requirements

Support facilities in the proposed Post Field Historic District should be associated with the historic context, *The First Thirty Years: Post Field and Its Role in Military Aviation, 1915-1945*. The buildings should retain their integrity of location and the principal architectural elements that identify them as pre-World War II support facilities. Alteration of these buildings may be grounds for disqualification.

STORAGE FACILITIES

Description

Storage facilities in the proposed Post Field Historic District include only one building—Inflammable Materials Storage (Building 5041). Storage buildings typically lack ornamentation, but may include architectural elements that blend with those incorporated in the design of surrounding buildings. Many examples of storage buildings at Fort Sill are of temporary construction.

Significance

The storage facility in the proposed Post Field Historic District may be eligible for inclusion in the National Register of Historic Places under Criterion A because of its association with the establishment of Army Aviation at Post Field. From its beginnings at this facility, Army Aviation has grown to be an invaluable part of the U.S. Army, providing organic air support for ground force units.

Registration Requirements

Storage facilities in the proposed Post Field Historic District should be associated with the historic context, *The First Thirty Years: Post Field and Its Role in Military Aviation, 1915-1945*. The buildings should retain their integrity of location and the principal architectural elements that identify them as pre-World War II storage facilities. Alteration of these buildings may be grounds for disqualification.

UTILITY AND INFRASTRUCTURE FACILITIES

Description

Utility and infrastructure facilities may include buildings with a wide variety of functions and forms. They house the operations and equipment that links, meters, and controls utilities such as water, gas, and electricity in the distribution of these utilities to the buildings and activities they serve. And in the case of sewage plants, utility and infrastructure facilities also treat the waste from buildings and activities. The proposed Post Field Historic District includes only two utility and infrastructure buildings, both small and of utilitarian architectural design—Building 5042, the Heat Plant; and Building 5091, the Distribution Transformer Building.

Significance

Utility and infrastructure facilities in the proposed Post Field Historic District may be eligible for inclusion in the National Register of Historic Places under Criterion A because of their association with the establishment of Army Aviation at Post Field. From its beginnings at this facility, Army Aviation has grown to be an invaluable part of the U.S. Army, providing organic air support for ground force units.

Registration Requirements

Utility and infrastructure facilities in the proposed Post Field Historic District should be associated with the historic context, *The First Thirty Years: Post Field and Its Role in Military Aviation, 1915-1945*. The buildings should retain their integrity of location and the principal architectural elements that identify them as pre-World War II housing facilities. Alteration of these buildings may be grounds for disqualification.

CHAPTER 6

CONCLUSION

SUMMARY OF STATUS

The 38 buildings considered to be contributing elements of the proposed Post Field Historic District include 21 single-family houses, eight single- and multi-bay garages, one aircraft hangar, one balloon hangar, an administration building, a fire station, a clinic, an industrial operations building, a storage building, and two utility buildings. All of these were constructed between 1932 and 1935²¹, and are considered permanent buildings. All the buildings constructed in a Mission/Spanish Colonial Revival architectural style, which constitutes a majority of the buildings considered contributing elements to the proposed historic district (82 percent of the total), retain sufficient integrity of structure and setting to be considered fair to excellent examples of this style.

The contributing elements to the proposed historic district are located in a fairly contiguous geographic area defined for the most part by Rumble, Tucker, Post, and Hatch roads (see Figure 1). The nine buildings within the proposed historic district that are not considered to be contributing elements include one building that is less than 50 years old (Building 5074, constructed in 1958) and eight temporary buildings (barracks and personnel support buildings) constructed in 1942 during the World War II mobilization effort. Although these latter buildings were a part of Post Field during the period when it was associated with the most significant event in its history—the education of pilots for observation and liaison work during World War II in the Department of Air Training, a division of the Field Artillery School, this department being the nascent form of Army Aviation—they have not been included as contributing elements since according to the *Programmatic Memorandum of Agreement Among the United States Department of Defense, Advisory Council on Historic Preservation, and the National Conference of State Historic Preservation Officers*, such World War II-era temporary mobilization buildings may be demolished.

The historic context included in this report establishes the “patterns, themes, or trends in history” by which the proposed Post Field Historic District can be “understood and its meaning (and ultimately its significance) within . . . history made clear” (U.S. Department of the Interior 1991:7), and has been used to aid in the appraisal and interpretation of the historic significance of Post Field. The airfield meets two of the four National Register criteria for significance (A and C) as outlined by the Secretary of the Interior.

²¹ The one possible exception is Building 5042, for which the date of completion is not certain. It is known to have had repairs completed in 1942, and so had likely been completed some years earlier.

Criterion A

As at many Army and Air Corps bases within the continental U.S. and abroad, deteriorating World War I-era housing at Post Field was replaced between 1932 and 1935 with permanent habitation and support buildings. Decisions about the type and extent of improvements at Post Field seem to have been largely determined by the War Department's decision to locate the Field Artillery School permanently at Fort Sill as improvements were initiated within a matter of days after that decision was finalized. As such, this period in the history of Post Field, and the buildings erected at this time, are significant within that era not as a separate entity but as an element of Fort Sill as a whole and as a part of the Field Artillery School—they help illustrate and contribute to the understanding of how Fort Sill as a whole has grown and evolved from a frontier post to a prominent U.S. military base.

Post Field achieved significance as a separate entity under Criterion A a few years later, when the Department of Air Training, the precursor of Army Aviation, was established there. Initial preparation for tests that convinced the War Department to set up Army Aviation were also undertaken at Post Field, and the airfield served as the home of this arm of the services until 1954, during its formative years when the department was redesignated the Army Ground Forces Air Training School, then the Army Aviation School.

Criterion C

The Administration Building (Building 5030), Fire Station (Building 5031), Detached Garages (buildings 5051, 5053, 5054, 5087-5090, and 5092), and Family Housing units (buildings 5060-5071 and 5075-5083) were all designed and built in the Mission/Spanish Colonial Revival architectural style and remain fair to excellent examples of this style, chosen in the mid-1920s by the War Department for construction in the southern and southwestern states. The relatively few modifications to these buildings have been for the most part confined to the interior, leaving the integrity of the exteriors quite high for all but the Fire Station. That building was modified by an addition to the north side and by the infill of one garage opening. The integrity of the setting is also still largely intact as it yet retains the feel of the era during which these buildings were constructed and achieved significance.

ASSESSMENT

The significance of the proposed Post Field Historic District from 1915 to 1945 under Criterion A is related not only to the significant events and developments that occurred at Post Field during that time, but is also related to Post Field being a reflection and expression of the development of military aviation from its humble beginnings in the early twentieth century to its incorporation as an integral element of artillery and armored units within the Army during World War II. Post Field, from its establishment in 1915, has served a unique role at the Fort Sill Military Reservation. Unfortunately, its association with World War I-era military aviation is no longer represented by existing buildings or structures. The buildings considered as contributing elements of the proposed Post Field Historic District were built between 1932 and 1935, the result in part of decisions to improve and expand military aviation capabilities in the U.S. and in part because of the decision to permanently locate the Field Artillery School at Fort Sill. These buildings, therefore, provided the base of operations for continuing experimentation and development in the use of both fixed-wing aircraft and balloons in support of artillery forces. These same buildings served as the base of operations for the Department of Air Training under the Field Artillery School during World War II as Army Aviation grew into a vital component of the U.S. military. With many good examples of the Mission/Spanish Colonial Revival architectural style adopted by the War Department for construction in southern and southwestern states during the second decade of the twentieth century remaining in the proposed Post Field Historic District, the proposed historic district is also considered eligible under Criterion C.

In summary, the proposed Post Field Historic District represents a unique segment of the Fort Sill Military Reservation as it evolved from a frontier military post into the center for field artillery training for the modern U.S. Army. Post Field is significant for it reflects the development of military aviation during the early twentieth century and served as the home for the development of Army Aviation.

REFERENCES CITED

Aerial Age Weekly

- 1918 Balloon Observers Needed. Volume VII, number 25 (2 September):1,215.

Aeronautics

- 1918a Report of the Chief Signal Officer, U.S.A. Volume XIV, number 224 (30 January):110-111.
- 1918b U.S. Aeronautical Bases. Volume XIV, number 227 (20 February):172.
- 1918c U.S. Aerial Photographic Force. Volume XIV, number 239 (15 May):416.

Anonymous

- 1921 *Air Service Observation School, Post Field, Fort Sill, Oklahoma.* April. On file, Henry Post Field, Fort Sill folder, Swett Collection, Fort Sill Museum Archives, Fort Sill, Oklahoma.
- 1943 Untitled document beginning, "The Field Artillery School located at Fort Sill, Oklahoma. . . ." On file in the Vertical Files, School of Fire, Fort Sill Place Names, Fort Sill Museum Archives, Fort Sill, Oklahoma.

Army Air Forces Aid Society

- 1944 *The Official Guide to the Army Air Forces.* Simon and Schuster, New York.

Austin, S.P., and D.E. Peter

- 1996 *Fort Sill Military Reservation Cultural Resources Management Plan.* Report submitted by Geo-Marine, Inc., Plano, Texas, and Gulf Engineers & Consultants, Inc., Baton Rouge, Louisiana, to the U.S. Army Corps of Engineers, Tulsa District, and the Directorate of Environmental Quality, Fort Sill Military Reservation.

Bamberger, R.S.

- 1918 Letter from the Command Officer of the Balloon Detachment, Post Field, to the Training Section of the Balloon Branch, Directory of Military Aeronautics, Washington, D.C. 23 October. On file, Box 2364, Project Files—Air Fields, Post Field; Central Decimal Files 1917-38; Record Group 18, National Archives and Records Administration, Washington, D.C.

Bleakley, W.

- 1929 Air Corps News From Post Field. News article from unidentified source, on file, Accidents and Aviation folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.

Brereton, L.H., C.W. Cousland, T.L. Gilbert, and G.V. Holloman

- 1929 Proceedings of a Board of Officers. Letter report stating the findings of a fire investigation, dated 9 January. On file, *Fire Board Reports*, Fort Sill Museum Archives, Fort Sill, Oklahoma.

Christy, J.

- 1974 Free Spirit in a Free Balloon. *Air Force Magazine* September:87-91.

Clark, F.

- 1985 Balloon Hangar, Memories of Frank Clark, 4458 Baltimore, Lawton, OK. Interview conducted by Vivian W. Looney, 22 January. On file, Lighter-than-air folder (1 of 2); Fort Sill Museum Archives, Fort Sill, Oklahoma.

Currey, C.B.

- 1984 *With Wings as Eagles*. U.S. Government Printing Office, Washington, D.C.

The Daily Oklahoman (DO)

- 1992 Hangar All That's Left of Balloons. 11 November, n.p. Photocopy of article on file in building records, Directorate of Environmental Quality, Fort Sill, Oklahoma.

Directorate of Public Works

- 1992 *U.S. Army Field Artillery Center and Fort Sill*, 1 March. Map on file, Real Property Office, Directorate of Public Works, Fort Sill, Oklahoma.

- 1995a *Building Information Schedule*, 23 May. Real Property Office, Directorate of Public Works, Fort Sill, Oklahoma.

- 1995b *Inventory of Military Real Property*, 10 August. Real Property Office, Directorate of Public Works, Fort Sill, Oklahoma.

The Field Artillery Journal

- 1933 A Brief History of Fort Sill and the Field Artillery School. *Field Artillery Journal*, Volume 33, pp. 528-541. On file, Swett Library, Fort Sill, Oklahoma.

- 1937 The Observation Balloon. January-February, pp. 446-447. Photocopy of article on file, Lighter-than-air folder (1 of 2), Fort Sill Museum Archives, Fort Sill, Oklahoma.

Ford, G.B.

- 1929 New Army Posts for Old. *The Quartermaster Review* November-December:19-22.

Fort Sill Fire Bugs

- 1926 Originally published as "F.A.S. Fire Bugs are Sentenced: Sentences Totaling 206 Years are Given 13 Enlisted Men," in the *Guidon* 14 Oct. 1926. Now bound and in the collections of the Swett Library, Fort Sill, Oklahoma.

Fort Sill Museum Archives

- 1937 Army's Only Motorized Balloon Flies Over City. 1 July, p. 1, 3. Clipping from unidentified newspaper, on file, Lighter-than-air folder (1 of 2), Fort Sill Museum Archives, Fort Sill, Oklahoma.

Freeman, M.D.

- 1994 Historic Context for Kelly Air Force Base: Kelly Air Force Base, An American Flying Field and Air Depot, 1917-1946. In *Kelly Air Force Base Cultural Resources Management Plan*, by D. Peter, M. Cliff, J. Freeman, and K. Kane, Appendix L. Prepared for Kelly Air Force Base, San Antonio, Texas, by Geo-Marine, Inc., Plano, Texas.

Futrell, F.

- 1983 The Development of Base Facilities. In *The Army Air Forces in World War II, Volume VI, Men and Planes*, edited by W.F. Craven and J.L. Cate, pp. 119-168. Office of Air Force History, United States Air Force, Washington, D.C.

Goss, W.A., and P.A. Bliss

- 1983 Air Defense of the United States. In *The Army Air Forces in World War II, Volume VI, Men and Planes*, edited by W.F. Craven and J.L. Cate, pp. 79-118. Office of Air Force History, United States Air Force, Washington, D.C.

Greer, T.H.

- 1983 Combat Crew and Unit Training. In *The Army Air Forces in World War II, Volume VI, Men and Planes*, edited by W.F. Craven and J.L. Cate, pp. 600-628. Office of Air Force History, United States Air Force, Washington, D.C.

Grenville, J.A.S.

- 1994 *A History of the World in the Twentieth Century*. The Belknap Press of Harvard University Press, Cambridge, Massachusetts.

Griswold, G.

- n.d. *Fort Sill, Oklahoma: A Chronology of Key Events*. On file, Fort Sill Museum Archives, Fort Sill, Oklahoma.

The Guidon

Fort Sill in-house publication. Issues on file, U.S. Fort Sill Museum Archives, Fort Sill, Oklahoma. Other locations of articles follow the reference.

- 1927 New Air Squadron will be Sent Here. 22 December, n.p. Copy on file, Fixed Wing folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.

- 1928a Amazing Progress Made in 3 Months. 30 August, n.p. Copy on file, Fixed Wing folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.

- 1928b New Air Squadron Will Come to Sill. 24 May, n.p. Photocopy on file, Schools and Aviation folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.

Gulf Engineers & Consultants, Inc. [GECI] and J.C. Freeman

- 1993 *Generalized Maintenance and Repair Plan for the U.S. Army Field Artillery Center and Fort Sill, Oklahoma*. January. Prepared for the U.S. Army Corps of Engineers, Tulsa District, and U.S. Army Field Artillery Center and Fort Sill, Oklahoma. Gulf Engineers & Consultants, Inc., Baton Rouge, Louisiana.

Hallauer, E.M.

- 1939 Landscaping the Army Post. *The Quartermaster Review* July-August:28-31.

Heflin, W.A. (editor)

1956 *The United States Air Force Dictionary*. Air University Press, Washington, D.C.

Hennessy, J.A.

1985 *The United States Army Air Arm, April 1861 to April 1917*. General Histories. Office of Air Force History, United States Air Force, Washington, D.C.

High Life

1918a Two of Chosen People. 26 July, n.p. On file, Henry Post Field History folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.

1918b Post Field Celebrates Anniversary. 9 August, n.p. On file, Henry Post Field History folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.

Historic Preservation Associates

1989 Historic Preservation Resource Identification Form. On file, Directorate of Environmental Quality, Fort Sill, Oklahoma.

Isbell, F.W.

1962 *Military Aeronautics in San Antonio, 1910-1918*. M.A. thesis, Trinity University, San Antonio.

Johnston, S.P.

1942 *Flying Squadrons: A Graphic History of the U.S. Army Air Forces*. Duell, Sloan and Pearce, New York.

Kennett, L.

1990 Developments to 1939. In *Case Studies in the Development of Close Air Support*, edited by B.F. Cooling, pp. 13-70. Office of Air Force History, United States Air Force, Washington, D.C.

Klinger, T.C.

1989 *Fort Sill Historic Structures Inventory at Fort Sill, Comanche County, Oklahoma*. Report submitted by Historic Preservation Associates, Fayetteville, Arkansas, to the Fort Sill Museum and the U.S. Army Corps of Engineers, Tulsa District, under Contract Number DACW56-86-D-0004, Delivery Order Number 1.

The Lawton Constitution (LC)

Microfilm copies on file at the Lawton Public Library, Lawton, Oklahoma. Other locations of the articles follow the reference.

1915 Aeroplanes Fly at Fort. 11 August, n.p. Typed copy on file, History (Aviation) folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.

1917a Carload of Planes Arrive at Ft. Sill. 20 August, p. 1.

1917b Balloon Station Certain. 13 September, p. 1.

1917c Aero and Balloon Students. 25 September, p. 1.

1923a U.S. Mail to Lawton by Air. 17 June, n.p. Copy on file, Air Mail folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.

- 1923b Kelly Field to Send Airplanes. 18 May, n.p. Photocopy on file, Schools and Aviation folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.
- 1924 Many Planes to Participate in Spring Maneuvers. 9 May, n.p. Photocopy on file, Schools and Aviation folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.
- McCaw, T.W.
- 1946 *History of the Field Artillery School, Volume II, World War II.* On file, Fort Sill Museum Archives, Fort Sill, Oklahoma.
- MacCloskey, M.
- 1967 *The United States Air Force.* Frederick A. Praeger, Publishers, New York.
- Maurer, M.
- 1987 *Aviation in the U.S. Army, 1919-1939.* Office of Air Force History, United States Air Force, Washington, D.C.
- Maurer, M. (editor)
- 1978a The U.S. Air Service in World War I. *Early Concepts of Military Aviation*, volume 2. Office of Air Force History, United States Air Force, Washington, D.C.
- 1978b The U.S. Air Service in World War I. *The Final Report and a Tactical History*, volume 1. Office of Air Force History, United States Air Force, Washington, D.C.
- Metzer, S.
- 1994 Grand old balloon hangar gets facelift by Fort Sill work crews (*sic*). In the *Lawton Constitution*, 27 August:6A. On file, Lighter-than-air folder (1 of 2), Fort Sill Museum Archives, Fort Sill, Oklahoma.
- Moore, S.T.
- 1958 *U.S. Airpower: The Story of American Fighting Planes and Missiles from Hydrogen Bags to Hydrogen War-heads.* Greenberg Publishers, New York.
- Nurse, H.B.
- 1928 The Planning of Army Posts. *The Quartermaster Review* September-October:14-16.
- Nye, W.S.
- 1936 *The Field Artillery School.* Typescript on file in the folder, "School of Fire, Fort Sill Place Names," vertical files, Fort Sill Museum Archives, Fort Sill, Oklahoma.
- 1969 *Carbine and Lance, The Story of Old Fort Sill.* University of Oklahoma Press, Norman, Oklahoma.
- Office of the Constructing Quartermaster (OCQM)
- n.d. *Quartermaster 117 Records Book for Post Field and Concurrent Camp.* On file, Fort Sill Museum Archives, Fort Sill, Oklahoma.
- ca. 1920 *Completion Report, Fort Sill, Okla.* On file, Box 294, Record Group 77, National Archives and Records Administration, Washington, D.C.

- ca. 1932 Completion Report of Erection of Double Hangar with Annexes, Post Field, Fort Sill, Oklahoma. In *Fort Sill, Book No. 6*, Box 257, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1933a Completion Report of the Air Corps Barracks at Post Field, Fort Sill, Oklahoma. In *Fort Sill, Book No. 5*, Box 257, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1933b Completion Report of Fireproofing Half of Air Corps Hangar No. 29, Post Field, Fort Sill. In *Fort Sill, Book No. 6*, Box 257, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1933c Completion Report of Ten (10) Single Noncommissioned Officers Quarters at Post Field, Fort Sill, Oklahoma. In *Fort Sill, Book No. 4*, Box 257, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1933d [*Completion Reports, Fort Sill, OK*] *Book 3*. On file, Box 256, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1934a Completion Report of Gasoline Fueling System at Post Field, Oklahoma. In *Fort Sill, Book No. 7*, Box 258, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1934b Completion Report of the Twenty-Nine (29) Non-commissioned Officers Quarters, Post Field and Fort Sill, Oklahoma. In *Fort Sill, Book No. 4*, Box 257, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1934c Completion Report of the Dispensary, Post Field, Fort Sill, Oklahoma. In *Fort Sill, Book No. 5*, Box 257, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1934d Completion Report of One Quartermaster Garage, Post Field, Fort Sill, Oklahoma. In *Fort Sill, Book No. 6*, Box 257, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1934e Completion Report of Paint, Oil and Dope Storage at Post Field, Fort Sill, Oklahoma. In *Fort Sill, Book No. 6*, Box 257, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1934f Completion Report of the Balloon Hangar, Post Field, Fort Sill, Oklahoma. In *Fort Sill, Book No. 6*, Box 257, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1934g Completion Report of the Fire Station, Post Field, Fort Sill, Oklahoma. In *Fort Sill, Book No. 6*, Box 257, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.
- ca. 1934h Completion Report, Garages, Post Field and Fort Sill, Oklahoma. In *Fort Sill, Book No. 6*, Box 257, Entry 1974, Record Group 92, National Archives and Records Administration, Washington, D.C.

Orndorff, B.

- 1993 Historic landmark undergoing environmental facelift (*sic*). In *The Cannoneer*, 1 July:4B. On file, Lighter-than-air folder (1 of 2), Fort Sill Museum Archives, Fort Sill, Oklahoma.

Parker, E.P.

- 1934 New Construction at Fort Sill. *The Field Artillery Journal*, January-February:5-14.

Peek, G.M.

- 1940 Memorandum from Maj. G.M. Peek, Field Artillery, Ft. Sill, Ok, to the Commandant. 14 November. On file, Files of Correspondence, 1936, Swett Library, Fort Sill, Oklahoma.

Plank, C.H., D.F. Walker, and S.L. Weld

- 1930 Letter report of the findings of a fire investigation, dated 4 March. On file, *Fire Board Reports*, Fort Sill Museum Archives, Fort Sill, Oklahoma.

The Quartermaster Review (QR)

- 1931 Housing the Army. March-April:11-17.
- 1932 New Construction Authorized. November-December:62.
- 1933 New Construction Authorized. January-February:63.

Real Property Records

various On file, Real Property Office, Fort Sill, Oklahoma.

Risch, E.

- 1962 *Quartermaster Support of the Army: A History of the Corps 1775-1939*. Quartermaster Historian's Office, Office of the Quartermaster General. U.S. Government Printing Office, Washington, D.C.

de Shazo, T.E.

- 1958 Letter to Master Sergeant Morris Swett. On file, Henry Post Field folder, Fort Sill, Swett Collection, U.S. Army Field Artillery and Fort Sill Museum, Fort Sill, Oklahoma.

Sheftick, G.

- 1984 First Aero Squadron Here. *The Cannoneer*, 16 August:5. Copy on file, Fixed Wing folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.

Spivey, T.

- 1995 Informal interview at Fort Sill Museum Archives and at Post Field, Fort Sill, Oklahoma. 21 September.

Sunderland, R.

- 1942 *History of the Field Artillery School, Volume I, 1911-1942*. On file, Fort Sill Museum Archives, Fort Sill, Oklahoma.

Swett, M.

- 1921 *Fort Sill, A History*. On file, Fort Sill Museum Archives, Fort Sill, Oklahoma.
- 1958 Letter to Major General Thomas E. de Shazo, Commanding General, Fort Sill, Oklahoma. On file, Henry Post Field folder, Fort Sill, Swett Collection, Fort Sill Museum Archives, Fort Sill, Oklahoma.

Thomas, E.G.

- 1940 Housing for the Army. *The Quartermaster Review* May-June 27-29+.

Underwood, J.S.

- 1991 *The Wings of Democracy, The Influence of Air Power on the Roosevelt Administration, 1933-1941*. Texas A & M University Press, College Station, Texas.

U.S. Army Corps of Engineers

- 1927 *Oklahoma, Comanche County, Fort Sill Military Reservation, Grid Zone "D."* On file, Cartographic Division, National Archives and Records Administration, Washington, D.C.

U.S. Department of the Interior

- 1991 *National Register Bulletin 15: How to Apply the National Register Criteria for Evaluation*. U.S. Department of the Interior, National Park Service, Interagency Resources Division. U.S. Government Printing Office, Washington, D.C.

Vance, W.E.

- 1957 History of Army Aviation. *United States Army Aviation Digest* 3(6):7-20.

Vogele, L.E.

- 1993 Historic Preservation Resource Identification Forms. On file, Directorate of Environmental Quality, Fort Sill, Oklahoma.

War Department

- 1917 Letter to the Chief Signal Officer and the Quartermaster General. 18 July, n.p. Copy on file, Henry Post Field History folder, Fort Sill Museum Archives, Fort Sill, Oklahoma.
- 1930 Proceedings of Board of Officers. 1 October. On file, folder 600.1, 1929 Fort Sill, Box 2130, Entry 1891, Record Group 92, National Archives and Records Administration, Washington, D.C.

Waters, A.W.

- 1983 *All the U.S. Air Force Airplanes, 1907-1983*. Hippocrene Books, New York.

Wheaton, F.B.

- 1928 The Architecture of the Army Post. *The Quartermaster Review* September-October:10-13.

Wilson, V.

- 1985 Fort Sill's Remarkable Balloon Company. *The Cannoneer* 7 February:n.p. On file, Fort Sill Museum Archives, Fort Sill, Oklahoma.